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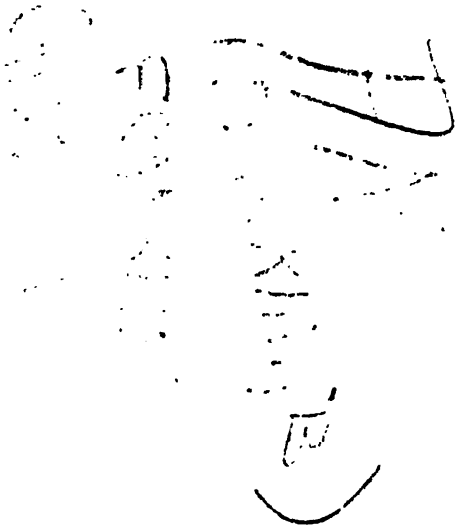

THE

Life and Writings

OF

BENJAMIN FRANKLIN.

NEW YORK:

Derby & Jackson

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MEMOIRS

OF

BENJAMIN FRANKLIN.

WRITTEN BY HIMSELF,

AND CONTINUED BY HIS GRANDSON AND OTHERS.

WITH

HIS SOCIAL EPISTOLARY CORRESPONDENCE, PHILOSOPHICAL, POLITICAL, AND MORAL LETTERS AND ESSAYS,

AND HIS

DIPLOMATIC TRANSACTIONS AS AGENT AT LONDON AND MINISTER PLENIPOTENTIARY AT VERSAILLES.

AUGMENTED BY MUCH MATTER NOT CONTAINED IN ANY FORMER EDITION

WITH A

POSTLIMINIOUS PREFACE.

BY WILLIAM DUANE.

IN TWO VOLUMES.

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REPORT

OF THE COMMITTEE OF GRIEVANCES OF THE ASSEMBLY OF PENNSYLVANIA, FEBRUARY 22, 1757.

In obedience to the order of the house, we have drawn up the heads of the most important aggrievances that occur to us, which the people of this province with great difficulty labour under; the many infractions of the constitution (in manifest violation of the royal grant, the proprietary charter, the laws of this province, and of the laws, usages, and customs of our mother-country) and other matters; which we apprehend call aloud for redress. They are as follow:

First—By the royal charter (which has ever been, ought to be, and truly is the principal and invariable fundamental of this constitution) king Charles the Second did give and grant unto William Penn, his heirs, and assigns, the province of Pennsylvania; and also to him and his heirs, and his or their deputies or lieutenants, free, full, and absolute power, for the good and happy government thereof, to make and enact any laws, according to their best discretion; by and with the advice, assent, and approbation of the freemen of the said country, or of their delegates or deputies; for the raising of money, or any other end appertaining to the public state, peace, or safety of the said country. By the words of this grant, it is evident, that full powers are granted to the deputies and lieutenants of William Penn and his heirs, to concur with the people in framing laws for their protection and the safety of the province, according to their best discretion; independent of any instructions or directions they should receive from their principals. And it is equally obvious to your committee, that the people of this province and their representatives were interested in this royal grant; and by virtue thereof, have an original right of legislation inherent in them; which neither the proprietors nor any other person whatsoever can divest them of, restrain, or abridge, without manifestly violating and destroying the letter, spirit, and design of this grant.

Nevertheless we unfortunately find, that the proprietaries of this province, regardless of this sacred fundamental of our rights and liberties, have so abridged and restricted their late and present governor's discretion in matters of legislation, by their illegal, impracticable, and unconstitutional instructions and prohibitions; that no bill for granting aids and supplies to our most gracious sovereign (be it ever so reasonable, expedient, and necessary for the defence of this his majesty's colony, and safety of his people) unless it be agreeable thereto, can meet with his approbation: by means whereof the many considerable sums of money which have been offered for those purposes, by the assemblies of this province (ever anxious to maintain his honour and rights), have been rejected: to the great encouragement of his majesty's enemies, and the imminent danger of the loss of this colony.

Secondly—The reprepresentatives of the people, in general assembly met, by virtue of the said royal grant, and the charter of privileges granted by the said William Penn, and a law of this province, have right to, and ought to enjoy all the powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the plantations in America: [also] it is an indubitable and now an incontested right of the commons of England, to grant aids and supplies to his majesty in any manner they think most easy to themselves and the people; and they [also] are the sole judges of the measure, manner, and time of granting and raising the same.

Nevertheless the proprietaries of this province, in contempt of the said royal grant, proprietary charter, and law of their colony, designing to subvert the fundamentals of this constitution, to deprive the assembly and people of their rights and privileges, and to assume an arbitrary and tyrannical power over the liberties and properties of his majesty's liege subjects, have so restrained the governors by the despotic instructions (which are not to be varied from, and are particularly directory in the framing and passing of money bills and supplies to his majesty, as to the mode, measure, and time), that it is impossible for the assembly, should they lose all sense of their most essential rights, and comply with those instructions, to grant sufficient aids for the defence of this his majesty's province from the common enemy.

Thirdly—In pursuance of sundry acts of general assembly, approved of by the crown, [and] a natural right inherent in every man antecedent to all laws, the assemblies of this province have had the power of disposing of the public moneys, that have been raised for the encouragement of trade and support of government, by the interest money arising by the loan of the bills of credit and the excise. No part of these moneys was ever paid by the proprietaries, or ever raised on their estates; and therefore they can have no pretence of right to a voice in the disposition of them. They have ever been applied with prudent frugality to the honour and advantage of the public, and the king's immediate service, to the general approbation of the people: the credit of the government has been preserved, and the debts of the public punctually discharged. In short, no inconveniencies but great and many advantages have accrued, from the assembly's prudent care and management of these funds.

Yet the proprietaries resolved to deprive the assemblies of the power and means of supporting an agent in England, and of prosecuting their complaints and remonstrating their aggrievances, when injured and oppressed, to his majesty and his parliament; and to rob them of this natural right (which has been so often approved of by their gracious sovereign), have, by their said instructions, prohibited their governor from giving his assent to any laws emitting or remitting any paper currency or bills of credit, or for raising money by excise or any other method; unless the governor or commander-in-chief for the time being, by clauses to be inserted therein, has a negative in the disposition of the moneys arising thereby; let the languishing circumstances of our trade be ever so great, and a further or greater medium be ever so necessary for its support.

Fourthly—By the laws and statutes of England, the chief rents, honours, and castles of the crown are taxed, and *pay their proportion* to the supplies that are granted to the king for the defence of the realm, and support of government: his majesty, the nobility of the realm, and all the British subjects do now actually contribute their proportion towards the defence of America in general, and this province in particular; and it is in a more especial manner the duty of the *proprietaries* to pay their proportion of a tax for the immediate preservation of their own estates in this province. To exempt, therefore, any part of their estates from their reasonable part of this necessary burthen, it is unjust as it is illegal, and as new as it is arbitrary.

Yet the proprietaries, notwithstanding the general danger to which the nation and its colonies are exposed, and great distress of this province in particular, by their said instructions, have prohibited their governors from passing laws for the raising supplies for its defence; *unless* all their located, unimproved, and unoccupied lands, quit-rents, fines, and purchase moneys on interest (the much greater part of their enormous estates in this colony) are expressly exempted from paying any part of the tax.

Fifthly—By virtue of the said royal charter, the proprietaries are invested with a power of doing every thing "which unto a complete establishment of justice, unto courts and tribunals, forms of judicature, and manner of proceedings, do belong." It was certainly the import and design of this grant, that the courts of judicature should be formed, and the judges and officers thereof hold their commissions, in a manner not repugnant, but agreeable to the laws and customs of England; that thereby they might remain free from the influence of persons in power, the rights of the people might be preserved, and their properties effectually secured. That by the guarantee, William Penn (understanding the said grant in this light) did, by his original frame of government, covenant and grant with the people, that the judges and other officers should hold their commissions during their *good behaviour, and no longer.*

Notwithstanding which, the governors of this province have, for many years past, granted all the commissions to the judges of the king's bench or supreme court of this province, and to the judges of the court of common pleas of the several counties, to be held during their *will and pleasure;* by means whereof, the said judges being subject to the influence and directions of the proprietaries and their governors, their favourites and creatures, the laws may not be duly administered or executed, but often wrested from their true sense to serve particular purposes; the foundation of justice may be liable to be destroyed; and the lives, laws, liberties, privileges, and properties of the people thereby rendered precarious and altogether insecure; to the great disgrace of our laws, and the inconceivable injury of his majesty's subjects.

Your committee further beg leave to add, that besides these aggrievances, there are other hardships the people of this province have experienced, that call for redress.—The *enlistment of servants, without the least satisfaction* being made to the masters, has not only prevented the cultivation of our lands, and diminished the trade and commerce of the province, but is a burden extremely unequal and oppressive to individuals. And should the practice continue, the consequence must prove very discouraging to the further settlement of this colony, and prejudicial to his majesty's future service.—Justice, therefore, demands, that satisfaction should be made to the masters of such enlisted servants; and that the right of masters to their servants be confirmed and settled.—But as those servants have been enlisted into his majesty's service for the general defence of America, and not of this province only, but all the colonies, and the nation in general, have and will receive equal benefit from their service; this satisfaction should be made at the expense of the nation, and not of the province only.

That the people now labour under *a burden of taxes*, almost insupportable by so young a colony, for the defence of its long-extended frontier, of about two hundred miles from New Jersey to Maryland; without either of those colonies, or the three lower counties on Delaware, contributing their proportion thereto; though their frontiers are in a great measure covered and protected by our forts. And should the war continue, and with it this unequal burden, many of his majesty's subjects in this province will be reduced to want, and the province, if not lost to the enemy, involved in debt, and sunk under its load.

That notwithstanding this weight of taxes, the assemblies of this province *have given to the general service* of the nation, five thousand pounds to purchase provisions for the troops under general Braddock; two thousand nine hundred and eighty-five pounds and eleven pence for clearing a road by his orders; ten thousand five hundred and fourteen pounds ten shillings and a penny to general Shirley, for the purchasing provisions for the New England forces; and expended the sum of two thousand three hundred and eighty-five pounds and two pence halfpenny

in supporting the inhabitants of Nova Scotia; which likewise we conceive ought to be a national expense.

And that his majesty's subjects, the merchants and insurers in England, as well as the merchants here and elsewhere, did during the last, and will during the present war, greatly suffer in their property, trade, and commerce, by the *enemy's privateers* on this coast, and at our capes, unless some method be fallen on to prevent it.

Wherefore your committee are of opinion, that the commissioners intended to be sent to England, to solicit a memorial and redress of the many infractions and violations of the constitution, should also have it in charge, and be instructed to represent to our most gracious sovereign and his parliaments, the several unequal burdens and hardships before mentioned; and endeavour to procure satisfaction to the masters of such servants as have been enlisted, and the right of masters to their servants established and confirmed; and obtain a repayment of the said several sums of money, some assistance towards defending our extensive frontier, and a vessel of war to protect the trade and commerce of this province.

Submitted to the correction of the house, February 22, 1757.

TO THE RIGHT HONOURABLE

ARTHUR ONSLOW, Esq.

SPEAKER OF THE HONOURABLE HOUSE OF COMMONS.

Sir—The subject of the following sheets is an unhappy one: the controversy between the proprietaries and successive assemblies of Pennsylvania. A controversy which has often embarrassed, if not endangered the public service; a controversy which has been long depending, and which still seems to be as far from an issue as ever.

Our blessed Saviour reproaches the Pharisees with laying heavy burdens on men's shoulders, which they themselves would not stir with a single finger.

Our proprietaries, sir, have done the same; and for the sake of the commonwealth, the province has hitherto submitted to the imposition. Not, indeed, without the most strenuous endeavours to lay the load equally, the fullest manifestations of their right to do so, and the strongest protestations against the violence put upon them.

Having been most injuriously misrepresented and traduced in print by the known agents and dependants of these gentlemen their fellow subjects, they at last find themselves obliged to set forth an historical state of their case, and to make their appeal to the public upon it.

With the public opinion in their favour, they may with the more confidence lift up their eyes to the wisdom of parliament and the majesty of the crown, from whence alone they can derive an effectual remedy.

To your hands, sir, these papers are most humbly presented, for considerations so obvious, that they scarce need any explanation.

The Roman provinces did not stand more in need of patronage than ours: and such clients as we are would have preferred the integrity of Cato to the fortune of Cæsar.

The cause we bring is in fact the cause of all the provinces in one; it is the cause of every British subject in every part of the British dominions. It is the cause of every man who deserves to be free, everywhere.

The propriety, therefore, of addressing these papers to a gentleman, who, for so many successive parliaments, with so much honour to himself and satisfaction to the public, has been at the head of the commons of Great Britain, cannot be called in question.

You will smile, sir, perhaps, as you read the references of a provincial assembly to the rights and claims of parliament; but, we humbly conceive, it will be without the least mixture of resentment; those assemblies having nothing more in view than barely to establish their privileges, on the most rational and solid basis they could find, for the security and service of their constituents.

And you are humbly besought, sir, not to think the worse of this address, because it has been made without your permission or privity.

Nobody asks leave to pay a debt; every Briton is your debtor, sir; and all we have said, or can say, is but a poor composition for what we owe you.

You have conferred as much honour on the chair you fill, as the chair has conferred on you.

Probity and dignity are your characteristics.

May that seat always derive the same lustre from the same qualities.

This at least ought to be our prayer, whether it is or not within our expectations.

For the province of Pennsylvania, as well as in my own private capacity, I have the honour to be, with the most profound respect,

Sir, your most obedient, humble servant,

THE EDITOR.

INTRODUCTION.

To obtain an infinite variety of purposes, by a few plain principles, is the characteristic of nature. As the eye is affected, so is the understanding; objects at a distance strike us according to their dimensions, or the quantity of light thrown upon them; near, according to their novelty or familiarity; as they are in motion or at rest. It is the same with actions. A battle is all motion:—a hero all glare; while such images are before us, we can attend to nothing else. Solon and Lycurgus would make no figure in the same scene with the king of Prussia: and we are at present so lost in the military scramble on the continent next us,* in which it must be confessed we are deeply interested, that we have scarce time to throw a glance towards America, where we have also much at stake, and where, if anywhere, our account must be made up at last.

We love to stare more than to reflect; and to be indolently amused at our leisure, rather than commit the smallest trespass on our patience by winding a painful, tedious maze, which would pay us in nothing but knowledge.

But then, as there are some eyes which can find nothing marvellous, but what is marvellously great, so there are others which are equally disposed to marvel at what is marvellously little; and who can derive as much entertainment from their microscope in examining a mite, as Dr. —— in ascertaining the geography of the moon, or measuring the tail of a comet.

Let this serve as an excuse for the author of these sheets, if he needs any, for bestowing them on the transactions of a colony, till of late hardly mentioned in our annals; in point of establishment one of the last upon the British list, and in point of rank one of the most subordinate; as being not only subject, in common with the rest, to the crown, but also to the claims of a proprietary, who thinks he does them honour enough in governing them by deputy; consequently so much farther removed from the royal eye, and so much the more exposed to the pressure of self-interested instructions.

Considerable, however, as most of them for happiness of situation, fertility of soil, product of valuable commodities, number of inhabitants, shipping, amount of exportations, latitude of rights and privileges, and every other requisite for the being and well-being of society, and more considerable than any of them all for the celerity of its growth, unassisted by any human help but the vigour and virtue of its own excellent constitution.

A father and his family, the latter united by interest and affection, the former to be revered for the wisdom of his institutions, and the indulgent use of his authority, was the form it was at first presented in. Those who were only ambitious of repose found it here; and as none returned with an evil report of the land, numbers followed, all partook of the leaven they found; the community still wore the same equal face; nobody aspired; nobody was oppressed; industry was sure of profit, knowledge of esteem, and virtue of veneration.

An assuming landlord, strongly disposed to convert free tenants into abject vassals, and to reap what he did not sow, countenanced and abetted by a few desperate and designing dependants on the one side; and on the other, all who have sense enough to know their rights, and spirit enough to defend them, combined as one man against the said landlord, and his encroachments, is the form it has since assumed.

And, surely, to a nation born to liberty like this, bound to leave it unimpaired as they received it from their fathers in perpetuity to their heirs, and interested in the conservation of it in every appendage of the British empire, the particulars of such a contest cannot be wholly indifferent.

On the contrary, it is reasonable to think, the first workings of power against liberty, and the natural efforts of unbiased men to secure themselves against the first approaches of oppression, must have a captivating power over every man of sensibility and discernment amongst us.

Liberty, it seems, thrives best in the woods. America best cultivates what Germany brought forth. And were it not for certain ugly comparisons, hard to be suppressed, the pleasure arising from such a research would be without alloy.

In the feuds of Florence, recorded by Machiavel, we find more to lament and less to praise. Scarce can we believe the first citizens of the ancient republics had such pretensions to consideration, though so highly celebrated in ancient story. And as to ourselves, we need no longer have recourse to the late glorious stand of the French parliaments to excite our emulation.

It is a known custom among farmers to change their corn from season to season for the sake of filling the bushel: and in case the wisdom of the age should condescend to make the like experiment in another shape, from hence we may learn whither to repair for the proper species.

It is not, however, to be presumed, that such as have long been accustomed to consider the colonies, in general, as only so many dependencies on the council-board, the board of trade, and the board of customs; or as a hot-bed for causes, jobs, and other pecuniary emoluments, and as bound as effectually by instructions as by laws, can be prevailed upon to consider these patriot rustics with any degree of respect.

Derision, on the contrary, must be the lot of him who imagines it in the power of the pen to set any lustre upon them; and indignation theirs for daring to assert and maintain the independency interwoven in their constitution, which now, it seems, is become an improper ingredient, and therefore to be excised away.

But how contemptibly soever these gentlemen may talk of the colonies, how cheap soever they may hold their assemblies, or how insignificant the planters and traders who compose them, truth will be truth, and principle principle notwithstanding.

Courage, wisdom, integrity, and honour are not to be measured by the sphere assigned them to act in, but by the trials they undergo, and the vouchers they furnish, and if so manifested, need neither robes nor titles to set them off.

* This publication was made in London during the war that begun in 1753, and the author, who always adapts himself to his situation, had discernment enough to perceive that a work on a subject so important would lose none of its consideration by being published in a remote colony. The introduction, which is a model of vivid style and sound wisdom, written as in London, and with the zeal of a man zealous for the prosperity of the British government.

FRANKLIN'S WORKS.

AN HISTORICAL REVIEW

OF THE

CONSTITUTION AND GOVERNMENT

OF

PENNSYLVANIA.

THE constitution of Pennsylvania is derived, first, from the *birthright* of every British subject; secondly, from the *royal charter* granted to William Penn by king Charles II., and thirdly, from the *charter of privileges* granted by the said William Penn as proprietary and governor, in virtue of the former, to the freemen of the said province and *territories;* being the last of *four* at several periods issued by the same authority.

The birthright of every British subject is, to have a property of his own, in his estate, person, and reputation; subject only to laws enacted by his own concurrence, either in person or by his representatives: and which birthright accompanies him wheresoever he wanders or rests; so long as he is within the pale of the British dominions, and is true to his allegiance.

The royal charter was granted to William Penn in the beginning of the year 1681. A most alarming period! The nation being in a strong ferment; and the court forming an arbitrary plan; which, under the countenance of a small standing army, they began the same year to carry into execution, by cajoling some corporations, and forcing others by *quo warrantos* to surrender their *charters:* so that by the abuse of law, the disuse of parliaments, and the terror of power, the kingdom became in effect the prey of will and pleasure.

The charter governments of America had, before this, afforded a place of refuge to the persecuted and miserable; and, as if to enlarge the field of liberty abroad, which had been so sacrilegiously contracted at home, Pennsylvania even *then* was made a new *asylum*, where all who wished or desired to be free might be so for ever.

The basis of the grant expressed in the preamble was, the merits and services of admiral Penn, and the commendable desire of his son to enlarge the British empire, to promote such useful commodities as might be of benefit to it, and to civilize the savage inhabitants.

In the third section, which constitutes the said William Penn the true and absolute proprietary of the said province, there is a saving to the crown, of the faith and allegiance of the said William Penn, his heirs and assigns, and of all *other* proprietaries, tenants, and inhabitants of the said province, as also of the sovereignty thereof.

The fourth, professing to repose special trust and confidence in the fidelity, wisdom, justice, and provident circumspection of the said Penn, grants to him and his heirs, and to his and their deputies, free, full, and absolute power, for the *good* and *happy* government of the said country, to ordain, make, and enact, and under his or their seals, to publish any laws whatsoever, for the raising of money for public uses of the said province, or for any other end appertaining either unto the public state, peace, or safety of the said country, or unto the private utility of particular persons, according to their *best discretion;* by and with the advice, assent, and approbation of the freemen of the said country, or the greater part of them, or of their delegates and deputies, to be assembled in such sort and form, as to him and them shall seem best, and as often as need shall require.

By the fifth, the said William Penn is impowered and authorized to erect courts of judicature, appoint judges, and administer justice in all forms, and carry all the laws so made as above, into execution, under the pains therein expressed; provided the said laws be consonant to reason, and not repugnant or contrary, (but as near as conveniently may be) agreeable to the laws and statutes and *rights* of England; with a saving to the crown in

case of appeals; for this reason doubtless, that in case any act of injustice or oppression was committed, the party injured might be sure of redress.

By the sixth, which presumes, that in the government of so great a country, sudden accidents might happen, which would require a remedy *before* the *freeholders* or their delegates could be assembled to the making of laws, the said William Penn, and his heirs, by themselves or their magistrates duly ordained, are impowered to make and constitute fit and wholesome ordinances, from time to time, as well for the preservation of the peace, as for the better government of the inhabitants, under the same proviso as that above, regarding the laws, and so as that the said ordinances be not extended in any sort *to bind, change*, or take away the right or interest of any person or persons, for or in their life, members, freehold, goods, or chattels.

And to the end, that neither the said William Penn or his heirs, or other the planters, owners, or inhabitants of the said province, may, by misconstruction of the power aforesaid, through inadvertency, or design, depart from their faith and allegiance to the crown, the seventh section provides, that a transcript or duplicate of all laws, so made and published as aforesaid, shall within five years after the making thereof, be transmitted and delivered to the privy council for the time being: and if declared by the king in council, inconsistent with the sovereignty or lawful prerogative of the crown, or contrary to the faith and allegiance due to the *legal government* of this realm, shall be adjudged void.

The said William Penn is also obliged to have an attorney, or agent, to be his resident representative, at some known place in London, who is to be answerable to the crown for any misdemeanour committed, or wilful default or neglect, committed by the said Penn against the laws of trade and navigation; and to defray the damages in his majesty's courts ascertained; and in case of failure, the government to be resumed and retained till payment has been made; without any prejudice however in any respect to the landholders or inhabitants, who are not to be affected or molested thereby.

His majesty, moreover, *covenants* and grants to and with the said William Penn, in the twentieth section, for himself, his heirs and successors, at no time thereafter, to impose or levy any tax on the inhabitants in any shape, unless the same be with the consent of the proprietary or chief governor, or assembly, or by act of parliament in England.

On pain of his highest displeasure, he also commands all his officers and ministers, that they do not presume at any time to attempt any thing to the contrary of the premises, or that they do in any sort withstand the same: and, on the contrary, enjoins them, to be at all times aiding and assisting, as was fitting to the said William Penn and his heirs, and unto the inhabitants and merchants of the province aforesaid, their servants, ministers, factors, and assigns, in the full use and fruition of the benefit of the said charter.

And in the last place, a provision is made, by the king's special will, ordinance, and command, that, in case any doubt or question should thereafter perchance arise, concerning the true sense or meaning of any word, clause, or sentence contained therein, such interpretation should be made thereof and allowed in any of his majesty's courts, as should be adjudged most advantageous and favourable to the said William Penn, his heirs and assigns; provided always, that no interpretation be admitted thereof, by which the allegiance due to the crown may suffer any prejudice or dimunution.

The whole consists of twenty-three sections; of which it is presumed, these are the most material. They are penned with all the appearance of candour and simplicity imaginable; so that if craft had any thing to do with them, never was craft better hid. As little is left as possible to *future* instructions, and no where is there to be found the shadow of a pretence, that such instructions should be laws. All is equally agreeable to law and reason, the claims of the crown and the rights of the subject; nor, indeed, would the grant have been valid if it had been otherwise. The words *legal government* are words of great significancy.—No command of the king's is a legal command, unless consonant to law, and authenticated by one of his seals:—the forms of office in such case providing, that nothing illegal shall be carried into execution; and the officer himself being responsible to the laws in case of yielding a criminal obedience.

It would therefore be a waste of words to show, that the crown is limited in all acts and grants, by the fundamentals of the constitution; and that, as it cannot alienate any one limb or joint of the state, so neither, on the other, can it establish any colony upon, or contract it within a narrower scale, than the subject is entitled to by the great charter of England.

But if it is remarkable, that such an instrument as this should be the growth of an arbitrary court, it is equally so, that the king's brother, James, duke of York, (afterwards the most unhappy of kings) was at the rebound, a party in it; for it seems, the right to all that tract of land now called the territories of Pennsylvania, was, by a prior grant, vested in him; and, in August, 1682, he assigned it by his deeds of feoffment to the said William Penn.

It may also be inferred, that the said Wil

liam Penn had been as diligent in collecting a number of proper adventurers together, as in obtaining the necessary authorities from the crown: for in the interval between the charter and the grant, he made use of the provisional powers given him by the sixth section of the former, to pass his first deed of settlement under the title of "Certain conditions, or concessions, agreed upon by William Penn, proprietary and governor of Pennsylvania, and those who are the adventurers and purchasers in the same province."

This, however, contains only rules of settlement, and of trade with, and treatment of the Indians, &c. with the addition of some general injunctions for preserving of order and keeping the peace, agreeable to the customs, usages, and laws of England.

In the next year following, Mr. Penn printed and published a system of government, under the following title, to wit, "The frame of the government of the province of Pennsylvania in America: together with certain laws agreed upon in England, by the governor and divers freemen of the aforesaid province. To be farther explained and confirmed *there* by the first provincial council, *if they see meet.*"

At the head of this frame, or system, is a short preliminary discourse, part of which serves to give us a more lively idea of Mr. Penn preaching in Gracechurch-street, than we derive from Raphael's Cartoon of Paul preaching at Athens: as a man of concience he sets out; as a man of reason he proceeds, and as a man of the world he offers the most plausible conditions to *all*, to the end that he might gain *some*.

Two paragraphs of this discourse, the people of Pennsylvania ought to have for ever before their eyes: to wit, 1. "Any government is free to the people (whatever be the frame) where the laws rule and the people are a party to those laws: and more than this is tyranny, oligarchy, or confusion." 2. "To support power in reverence with the people, and to secure the people from the abuse of power, that they may be free by their just obedience, and the magistrates honourable for their just administration, are the great ends of all government."

This frame consisted of twenty-four articles, and savoured very strongly of Harrington and his Oceana. In the governor and freemen of the province, in the form of a provincial council, (always in being and yet always changing,) and general assembly, the government was placed. By them conjunctively, all laws were to be made, all officers appointed, and all public affairs transacted. Seventy-two was the number this council was to consist of: they were to be chosen by the freemen; and, though the governor or his deputy was to be perpetual president, he had but a treble vote. One third of them was, at the first, to be chosen for three years, one third for two years, and one third for one year; in such manner that there should be an annual succession of twenty-four new members, &c. The general assembly was at first to consist of all the freemen, afterwards of two hundred, and never was to exceed five hundred.

The laws agreed upon in England were in all forty; partly political, partly moral, and partly economical. They are of the nature of an original compact between the proprietary and the freemen, and as such were reciprocally received and executed.

But in the following year the scene of action being shifted from the mother country to the colony, the deportment of the legislator was shifted too. Less of the man of God now appeared, and more of the man of the world.

One point he had already carried against the inclination of his followers; namely, the reservation of quit-rents, which they had remonstrated against as a burden in itself, and, added to the purchase-money, was without precedent in any other colony: but he artfully distinguishing the two capacities of proprietary and governor; and insinuating, that government must be supported with splendour and dignity, and that by this expedient they would be exempt from other taxes; the bait took, and the point was carried.

To unite the subtlety of the serpent with the innocence of the dove is not so easily done as said. Having in this instance experienced the weight of his credit and the power of his persuasion, he was no sooner landed, than he formed a double scheme for uniting the province with the territory, though it does not appear he was properly authorized so to do, and to substitute another frame of government in lieu of the former, which having answered the great purpose of inducement here at home,* for collecting of subjects, he was now inclined to render somewhat more favourable to himself in point of government.

Of much artifice we find him accused (by the provincial assembly of 1704, in a representation addressed to himself) in the whole course of this proceeding; whether justly or not let the world determine.

They tell him, for example, in so many words, "That we find by the minutes of the assembly and other papers, as well as living witnesses, that, soon after thy first arrival here, thou, having obtained the duke's grant for the *three lower counties* [the *territory* that is to say] prevailed with the people of the province to unite in legislation and government with them of the lower counties; and then by a subtle contrivance and artifice, laid deeper than the capacities of some could fathom, or

* England, where this Review was first published

the circumstances of many could admit them time then to consider of, a way was found out to lay aside that, and introduce another charter, which thou completed in the year 1683."

At a place called Chester, in December, 1682, the freemen both of the province and territory were convened; but those of the province having, by election, returned twelve persons to serve for each county as members of the provincial council, were induced to accompany that return with significations and petitions by their sheriffs, &c. importing that because of the fewness of the people, their inability in estate, and their unskilfulness in matters of government, their desire was, that the twelve so returned for each county, might serve both for provincial council and general assembly; that is to say, three of each twelve for members of council, and the remaining nine for assembly-men; with the same powers and privileges granted by the charter or frame of government to the whole: and according to these significations and petitions of theirs, an act of settlement was drawn up and passed, in which, after the said charter or frame has been artfully mentioned as one of those *probationary* laws, which by the council and assembly might be altered at pleasure, the model of the said council and assembly so reduced is admitted; the persons so returned are declared and enacted to be the legal council and assembly; the number of the said council is fixed at three persons out of each county for the time to come; the number of assembly-men for each is reduced to six; and, after a variety of farther regulations, the said charter or frame is solemnly recognised and accepted: as if with these alterations and amendments it was understood to be complete.

The act for uniting the province and the territory humbly *besought*, as it is therein specified, by the deputies of the said territory, was also passed at the same time and place; in virtue of which all the benefits and advantages before granted to the provincials, were equally communicated to both; and both from that time were to be as one people under one and the same government.

Of this act, however, the provincial assembly of 1704, in the representation to their proprietary before cited, complain in the terms following:

"And as to the conveniency of the union of the province and lower counties, we cannot gainsay it, if the king had granted thee the government as the duke had done the soil: but to our great grief and trouble, we cannot find that thou had any such grant; and if thou had, thou would not produce it, though often requested so to do: therefore we take it the harder that thou, who knew how precarious thy power was to govern the lower counties, should bring thy province into such a state and condition, that whenever the crown had assumed that government, or the people there revolted, or refused to act with us in legislation, as they often did, that then the said second charter should become impracticable, and the privileges thereby granted of no effect to the province, because the representatives of the lower counties were equal in number with those of the province, and the charter required a greater number than the province had, or by charter could elect for members of council and assembly; and our numbers, by the charter, could not be increased without the revolter's consent."

In the interval between this session at Chester, in December, 1682, and the next at Philadelphia in March and April, 1683, Mr. Penn, notwithstanding the act of settlement, furnished himself with another *frame*, in part conformable to the first, in part modified according to the said act; and in part essentially different from both: and concerning this again, the assembly of 1704, in their representation aforesaid, thus freely expostulate with the proprietary: to wit,

"The motives which we find upon record, inducing the people to accept of that second charter, were chiefly two, viz. That the number of representatives would prove burdensome to the country: and the other was, that, in regard thou had but a *treble vote*, the people, through their unskilfulness in the laws of trade and navigation, might pass some laws over thy head repugnant thereunto, which might occasion the forfeiture of the king's letters patent, by which this country was granted to thee; and wherein is a clause for that purpose, which we find much relied upon, and frequently read or urged in the assembly of that time; and security demanded by thee from the people on that account."

"As to the first motive, we know that the number of representatives might have been very well reduced without a new charter: and as to the laws of trade, we cannot conceive that a people so fond of thyself for (their) governor, and who saw much with thy eyes in those affairs, should, against thy advice and cautions, make laws repugnant to those of trade, and so bring trouble and disappointment upon themselves, by being a means of suspending thy administration; the influence whereof and hopes of thy continuance therein, induced them, as we charitably conclude, to embark with thee in that great and weighty affair, more than the honour due to persons in those stations, or any sinister ends destructive to the constitution they acted by. Therefore, we see no just cause thou had to insist on such security, or to have a negative upon bills to be passed into laws in general assemblies, since thou had by the said charter (pursuant to the authority and direction of the king's letters patent aforesaid) formed those assem-

blies; and, thereupon reserved but a treble vote in the provincial council, which could not be more injurious to thee than to the people, for the reasons aforesaid."

And again, afterwards;

"Thus was the first charter laid aside, contrary to the tenor thereof, and true intent of the first adventurers; and the second charter introduced and accepted by the general assembly held at Philadelphia, in the first and second months, 1683, where thou solemnly testified, that what was inserted in that charter was solely intended by thee for the good and benefit of the freemen of the province, and prosecuted with much earnestness in thy spirit towards God at the time of its composure."

In less than three years after Mr. Penn's arrival in the province, and when it *began* to wear a thriving face, a dispute between lord Baltimore, proprietary of Maryland, and him, furnished him with a pretence to return to England; leaving the government to be administered by five commissioners of state, taken out of the provincial council, the remainder of that council, and the general assembly.

James II. was now on the throne: Mr. Penn was attached to him closely by obligations, if not by principles: that prince's impolitic plan of restoring the Roman ritual by universal toleration, seems to have been almost inspired by him: in the king's dispute with the fellows of Magdalen college, Mr. Penn was an active instrument on his majesty's behalf, not without some injurious imputations to himself: and for some years after the revolution, had the misfortune to lie under the suspicions and the frowns of the government.

His nursling-colony was yet in the cradle, while it was thus deserted; consequently stood in need of all expedience to facilitate its growth, and all preservatives against disorders.

Disorders it actually fell into, which are still to be traced in the minutes of their assemblies: one More in particular, we find impeached by the assembly before the provincial council, of misdemeanour in ten several articles, and, in a letter to the proprietary, signed by John White, speaker, represented as an *aspiring and corrupt minister of state.*

We find the assembly and provincial council at variance about their respective powers and privileges; what is more extraordinary still, we find the proprietary, in 1686, requiring and enjoining his said commissioners to dissolve the frame of government by his late charter constituted; and they not being able to carry this point, we find, in December, 1688, a deputy-governor appointed, captain John Blackwell, who, like a practised man, set out with endeavouring to sow dissensions among the freemen, and by making such a display of the proprietary power as might awe the majority into proprietary measures.

Thus John White, the former speaker, who signed the letter from the assembly to Mr. Penn, concerning the misdemeanours of More, was no sooner returned for the county of Newcastle, than he was thrown into prison, and by violence wrested out of the hands of the assembly, after he had been brought up to Philadelphia by *habeas corpus.* The said governor also finding that the said assembly was not of the proprietary complexion, and that they were disposed to open the session with a discussion of grievances, found pretences for several days to evade giving them audience, all either frivolous or groundless; and in the mean time, left no stone unturned to temper the council to his own mind; and then by their concurrence, to make a suitable impression upon the assembly.

The assembly, however, not only retained their firmness, but also took care to leave the two following memorials of it in their minutes: to wit,

May 14. "That whereas this assembly have attended here for several days, and have sent several messengers to the governor and council, appointed to confer with the members of assembly according to charter: and whereas the said messengers have given this house to understand, that they were answered by the governor, that there was not a full council to receive them: and, whereas this house being well assured, that there is, and has been, for these two days last past, a competent number of members in town, ready to yield their attendance, yet several of the said members have not been hitherto *permitted* to sit in council, to the great detriment and grievance of the country: therefore, we desire, that these grievances may be speedily redressed, and our liberties inviolably preserved."

May 15. "That no person who is commissionated or appointed by the governor to receive the governor's fines, forfeitures, or revenues whatsoever, shall sit in judgment in any court of judicature within this government, in any matter or cause whatsoever, where a fine or forfeiture shall or may accrue to the governor."

On the last of these two days, and previous to the last of these votes, the governor at length favoured them with the meeting desired; and thereat made a speech, in which are the following remarkable paragraphs: viz.

"I suppose you have been formerly acquainted with the reasons and necessity of the proprietary's absenting himself so long from you as till the late revolutions in England; he hath frequently evidenced his strong desire above all things to be restored to you: what hath hindered of late, we have from the divers reports of things transacted in England, which require we should wait for their being

rendered more certain; and, in the mean time, strive in our prayers, that the Lord, who governs this universe, will do it in his wisdom and good will, towards all his suffering people, and ourselves in particular.

"I suppose, gentlemen, you expected some bills should have been sent down to you from the provincial council, for your consideration, before your coming up and passing them into laws at this meeting. Divers reasons might be why none were; I shall acquaint you with some of them: viz.

"1. The honourable proprietary, for reasons known to himself, hath given positive directions for letting all the laws drop or fall, except the *fundamentals*, and afterwards for calling together the legislative authority, to pass such of them, or others, as they should see fit for the future; which is my full intention to do.

"2. The honourable proprietary, being by his patent from the king, authorized by himself, his heirs, &c. with consent of the freemen, to make, and under his seal to publish, necessary laws for the good of the people; which had never been done with all requisite circumstances, whilst himself was here; and without which, I must doubt whether what were passed, or should hereafter be passed, have that due sanction or establishment which laws require; and finding the great seal, under which they should pass, was not to be had, the keeper thereof refusing to allow the use of it in any cases by my direction, I therefore looked upon it as labour in vain to attempt it.

"3. The present posture and alteration of affairs in England; the uncertainty touching the condition of the proprietary himself, and his power: and the fears of what dangers might ensue, as well to him as ourselves, in passing and confirming laws of such a nature, as would have been approved of in this conjuncture of affairs, forbad it.

"4. The animosities and dissensions which were here amongst you before I came, and have been lately revived amongst the members of the provincial council, by the endeavours of some, as to their proceedings in that service, hindered their agreement in council, as to doing any thing; insomuch as I was constrained, for love and peace sake, upon that and the other foregoing considerations, to dismiss them from further attendance on that account.

"5. An expedient occurred to me, of less danger to us all: viz. that I, being by my commission, as aforesaid, referred for my rule and instructions to the laws then in being, and which had been, as well by the proprietary as people, approved and owned as such, whilst he was amongst you here, and observing that he had reserved the confirmation and disannulling of what laws should be made in his absence, to himself; so that if any were or should be proposed, they could not take effect among us as laws, till his pleasure should be therein declared; I came to a resolution within myself, of observing them in the course of my government, as so many rules and instructions given me by my master, as far as I should find and judge them not contrary to the laws of England, and in supplying the want or defect in your laws by the laws of England, which I believe will be most grateful to our superiors in England, especially at this time; and will be as useful among ourselves, there being no other way occurring to my understanding whereby you may receive the benefit of them: and in this purpose I am ready, unless you should otherwise advise, until by better information out of England, we shall be led out of these state meanders."

The assembly answered, among other things, as follows: viz.

"We heartily wish that thy design in coming hither, with all imaginable respect to our governor and inhabitants here, may be pursued accordingly with suitable measures; and we cannot but have that opinion of our worthy governor's tender regard to the people here, that as he will justify no unbecoming behaviour in us towards his representative, so we hope he will vindicate no unlawful or rigid procedure against us. As to our governor's absence, we are very sensible that, as it may be to his disappointment, so it is extremely to our prejudice. Were we in expectation of receiving bills from thee and the council as formerly; to the reason thou art pleased to give why none are sent, that the proprietary and governor hath given directions for letting all the laws drop or fall, we are credibly informed, that afterwards he was well pleased they should stand; and all the laws made here since his departure, were sent for his perusal, and none of them, to our knowledge, in the least declared void by him; neither do we conceive that he hath any reason so to do.

"As to the establishment of laws, we expected nor aimed at any higher sanction than was used in the governor's time; but in case bills had been prepared and promulgated according to charter, and had passed by us into laws, and the great seal had been necessary and the same duly required to be applied to the said laws, and the keeper refused the same, then we might justly blame such refusal: but as to the way thou mentions, that our proprietary and governor is authorized by himself, and with consent of the freemen, to make laws, and under his seal to publish them, and not in the granted way of the charter and *act of settlement;* as we do not desire, so our hopes are, that no laws of that make will be imposed upon us: and had we made laws at this time, as formerly, we question not but that they had been as inoffensive in the present conjuncture, as afore: and we

do conceive, that our laws here, not being declared or adjudged by the king under his privy seal to be void, do remain and stand in full force, according to the true intent and meaning thereof.

"As for the charge of animosities and dissensions amongst us before thy coming here, it is so general, that we can make no other answer than that in matters of government, our apprehensions were otherwise, the end of good government being answered, in that power was supported in reverence with the people, and the people were secured from the abuse of power; but for what thou mentions to have been renewed since amongst the members of council, we leave them to answer.

"As to the expedient proposed, of thy governing this province and territories, by such of the laws as were made before our proprietary and governor went hence, which thou shalt judge not contrary to the laws of England, we conceive no such expedient can be consistent with our constitution, without the concurrence of the council, according to such methods as have been heretofore used in legislature, and what course of government is otherwise, will be ungrateful and uncertain to us, for how far the laws of England are to be our rules, is declared by the king's letters patent.

"As to thy assuring us, thy just compliance with us, in what we may reasonably desire, we take it kindly, and do desire that our members of council may be permitted to sit, according to our former request."

The governor finding himself thus steadily opposed, had recourse to another piece of practice, which was to prevail on certain members to withdraw themselves from the house: the house, on the other hand, voted this to be a treachery, and farther prepared and presented the following request to the governor: viz.

"To the governor and council, sitting at Philadelphia, the twentieth day of the third month, 1689.

"We the representatives of the freemen of Pennsylvania, and territories thereof, in assembly met, being much disappointed in our expectation in not finding any bills prepared and promulgated by you for a further concurrence; and perceiving three members duly elected to serve in council (in whose wisdom and faithfulness we much confide) too long kept out; and that a member of our own, is treated with great rigor and severity in the time of assembly, and not allowed to be with us, though most of us have known him to have been serviceable therein these several years: we (being under a strait in these considerations) do request your tender regard of our grievances already presented, and of our answer presented to the governor in council, to his speech delivered to us there; and we do desire, you do not go to dismiss us until we are received, and righted in our just complaints: and that we be not discouraged in charging before the provincial council, such persons or members whom we can with great probability make appear to be ill ministers and chief authors of the present arbitrariness in government; and who are men unworthy as we conceive, to be much consulted with, and unfit to be chief magistrates.—What we purpose to do herein, shall be orderly, speedily, and within bounds."

It does not appear that this request met with any regard, or that the proprietary interest gained any ground in the assemblies held the two subsequent years: and in the year 1693, the king and queen assumed the government of the colony into their own hands; under what pretext, in virtue of what management, whether to gratify any displeasure conceived against Mr. Penn, or in concert with him, is not specified.

Colonel Fletcher was appointed governor of New York and Pennsylvania by one and the same commission, with equal powers and prerogatives in both provinces: as if there was no such thing as a charter extant.

This commission of his was, also, accompanied with a letter from the queen, countersigned Nottingham, requiring him, as governor of Pennsylvania, to send such aid or assistance in men or otherwise, for the security of the province of New York against the attempts of the French and Indians, as the condition of the said colony would permit, as if the good will of the freemen was no longer worth mentioning.

To the assembly, however, this royal visiter thought fit to communicate both his commission and her majesty's said letter. But then it was an assembly widely different from that appointed by their charter. Instead of six members for each of the six counties, those of Philadelphia and New Castle were reduced to four each, and the rest to three; difference sixteen: and, as an act of grace, his excellency dispensed with the oaths of such as made it a point of conscience not to swear; and accepted a written profession and declaration of allegiance, before established in their stead.—Whether so strange an innovation was openly and specially complained of or not, the assembly had nevertheless the spirit to open their session with the following resolution, which passed *nem. con.* "That the laws of this province that were in force and practice before the arrival of this present governor, are still in force: and that the assembly have a right humbly to move the governor for a continuation or confirmation of the same."

They also interwove this vote of theirs in their address to him, and not unartfully introduced it under the umbrage of an insinuation that the king and queen had thought fit to

appoint him to be their governor, because of the absence of their proprietary; but derived no benefit from it: for the governor bluntly told them, "he was sorry to find their desires grounded upon so great mistakes:" adding these emphatical expressions, "the absence of the proprietary is the least cause mentioned in their majesties' letters patent, for their majesties asserting their undoubted right of governing their subjects in this province. There are reasons of greater moment: as the neglects and miscarriages in the late administration; the want of necessary defence against the enemy; the danger of [the province must be understood] being lost from the crown.—The constitution of their majesties' government and that of Mr. Penn's are in *direct opposition* one to the other: if you will be tenacious in stickling for this, it is a plain demonstration, use what words you please, that indeed you decline the other."

The assembly again, not to be wanting in duty to the king and queen, nor consistency to themselves, admitted their majesties' right of government to be indubitable; but would not allow themselves to be under any mistake in relation to the proprietary's absence. "And to the other reasons rendered, (said they in their remonstrances) for the superceding our proprietary's governancy, we apprehend [they] are founded on misinformations; for the courts of justice were open in all counties in this government, and justice duly executed from the highest crimes of treason and murder to the determining the lowest difference about property, before the date or arrival of the governor's commission. Neither do we apprehend, that the province was in danger of being lost from the crown, although the government was in the hands of some whose principles are not for war: and we conceive, that the present governancy hath no direct opposition (with respect to the king's government here in general) to our proprietary's William Penn, though the exercise of thy authority at present supersedes that of our said proprietary: nevertheless we readily own thee for our lawful governor, saving to ourselves and those whom we represent, our and their just rights and privileges."

Proceeding then to business, they voted a supply; but inclined to have their laws confirmed and their grievances redressed first: accordingly, they sent up a committee of ten, with the book of their laws to the governor for his acceptance and ratification: and, after a long debate between him, assisted by five of his council, and them, which was terminated on his side somewhat equivocally, he sent two of the said council to assure the house, in his name, of his confirmation of all the said laws (excepting one relating to shipwrecks) during the king's pleasure: for which they thought proper to return him a vote of thanks.

Nor is it much to be wondered at, that men taken by surprise, out of the hands of their *friend* the proprietary, and exposed at once to a wrestling-match with the crown, which they had never had any immediate transactions with before, should submit to hold their liberties by courtesy, rather than incur the least risk of not holding them at all.

There was, however, a party among them, who having drawn up a petition of right, claiming and desiring the use and benefit of two hundred and three laws therein specified, as in all respects consonant to their charter, and none of them annulled by the crown in consequence of the power reserved to the sovereign; would hear of no abatement; and who had credit enough with the assembly to obtain the sending a message to the governor, signifying, "that it was the sense and expectation of the assembly, that aggrievances ought to be redressed before any bill of supply ought to pass."

And here their hearts failed them: for the governor having returned the bill sent up with the message which he had proposed amendments to, without any specifications of what those amendments were to be, with the following answer, "that the assembly should have no account of the amendments of the bill, till they came in a full house before him to give the last sanction to the laws;" and farther, "that he saw nothing would do but an annexion to New York." The menace carried the supply.

When the bill for granting it was however sent up, they not only sent up the roll of their laws with it, but also gave that part of their order the first place in their books.

They further "Resolved, *nem. con.* that all bills sent to the governor and council in order to be amended, ought to be returned to this house, to have their farther approbation upon such amendments, before they can have their final assent to pass into laws."

And though they did not join with their committee of ten in the following paper, they suffered it to be entered in their books, by way of protest on their behalf: to wit,

"We whose names are hereunto subscribed, representatives of the freemen of this province in assembly, do declare, it is the undoubted right of this house to receive back from the governor and council all such bills as are sent up for their approbation or amendments: and that it is as necessary to know the amendments, and debate the same, as the body of the bills: and that the denial of that right is destructive to the freedom of making laws. And we also declare, it is the right of the assembly, that, before any bill for supplies be presented for the last sanction of a

law, aggrievances ought to be redressed. Therefore, we, with *protestation* (saving our just rights in assembly) do declare, that the assent of such of us, as were for sending up the bill this morning, was merely in consideration of the governor's speedy departure, but that it should not be drawn into example or precedent for the future. DAVID LLOYD," &c.

And concerning this whole period, we find the freemen in assembly met for the year 1704, thus farther expostulating with their proprietary, in the remonstrance already more than once referred to: to wit, "But what thou and they (the five commissioners of state) could not effect in that behalf, was performed by colonel Fletcher in the year 1693, and then we were brought under the immediate direction of the crown, but with commands for him to govern us by the laws of the country: and although both the laws and charter had been long before transmitted to thee, in order to get the late king's (James) approbation thereof, which we insisted upon, and urged that they were laws till disapproved, yet thou having sent no account whether they were approved or not, we were forced to comply with him, and accept of such as he pleased: but the charter he totally rejected."

Before he set out for New York, he did however give a written sanction to the laws required; and the next year's assembly proved notwithstanding to be of the same leaven with the last.

This assembly had been summoned by the writs of the lieutenant-governor (Markham) and when met in a humour to state and redress the grievances of the colony, found themselves precluded from acting by an order from Fletcher for their adjournment.

That, therefore, they might make the most of two days, they appointed a committee of grievances; and having received their report, agreed upon a remonstrance to the governor thereon, containing a complaint of their being sent for only to be dismissed; asserting the right of the house to adjourn themselves; and among several other particulars, calling upon the governor so to exert his power and authority, that cases determined by juries might not be unduly avoided by determinations in equity; that to prevent arbitrary assessments and the dissatisfaction they gave rise to, the justices of the peace might consult with, and be directed by the approbation of the several grand juries; and that the money raised by the last assembly might be properly applied and properly accounted for to the present at their next sitting.

Their right of adjourning themselves having been admitted, they met accordingly towards the end of the next month.—Governor Fletcher was by this time returned to them in person; and in the opening of his speech, made them a handsome apology for not meeting them before; urging the necessity of a sudden journey to Albany, to endeavour at reclaiming the *five nations of Indians*, hitherto the allies of England, but now confederated with the governor of Canada against us; said he had brought the papers which passed at the conference along with him, for their satisfaction; that their Indians would be next forced into the same fatal confederacy; that he had seen with his eyes, a large tract of cultivated land about Albany, which had been abandoned by the inhabitants, rather through the unkindness of their neighbours in refusing them assistance, than by the force of the enemy: prayed, that those who shut their eyes against a distant danger, might not find it at their own doors; extolled the two provinces of Jersey for the aids they had sent; and concluded thus, "*Gentlemen*, I consider your principles, that you will not carry arms, nor levy money to make war, though for your own defence; yet I hope you will not refuse to *feed the hungry* and *clothe the naked:* my meaning is to supply those Indian nations with such necessaries as may influence them to a continuance of their friendship to these provinces. And now, gentlemen, if you will consider wherein I may be useful to you, according to the tenor of my commission, in redressing your grievances, if you have any, you shall find me ready to act by the rules of loyalty, with a true regard to liberty and property."

What appears to have been most remarkable in this session, was a dispute between the governor and the house about a money bill: he alleging it was inconsistent with his trust to pass the bill, because they had named collectors therein, which seemed to derogate from the confidence reposed in the king's officer appointed to collect the last tax; and insisting upon some answer to the queen's letter, before he came to a final resolution concerning it; and they at once adhering to their bill, and desiring it might not be rejected on the first of those accounts; since they could not but assert their undoubted right to appropriate as well as raise money, agreeable to the privileges heretofore granted them, the practice in England, as well as in that and also in some of the neighbouring colonies; and that as to the receiver, when their appropriations had been answered, he was to dispose of the remainder as the governor and council should order.

The governor still pressed for their answer to her majesty, instead of giving them the satisfaction desired; and the said answer proving to be a remonstrance, he dissolved them.

Of the next sessions the accounts are extremely imperfect. We find, indeed, by a course of minutes, that a joint committee of the council, at the requisition of the governor, had several meetings, to consider of the queen's letter, the governor's demands there-

on in his speech, and an act of settlement; that an answer to his speech was drawn up and sent to the governor, together with an act of settlement; that the messengers on their return, reported, they had delivered both, and were told the governor and council had no farther business at present; and that after several adjournments, being met in committee, and in high debate, their attendance was required by the governor in order to dissolve them.

That the demands made upon them, in virtue of the queen's letter, were the subject of these debates, is more than probable: and if so, it will follow, that their want of will or power to comply with them was the cause of their dissolution.

In the year 1696, being the next year following, Markham, once the proprietary's secretary and clerk of the council, and of late lieutenant-governor, summoned the next assembly, as lieutenant to the proprietary now reinstated in the government; and at their meeting, recommended governor Fletcher's speech at the opening of the New York assembly, thereby to excite the charity of Pennsylvania, in relieving the poor Indians, whose corn and provisions had been destroyed by the French: and the sense of the house upon it was, by way of message, thus communicated.

"Whereas the governor has been pleased to convene us, by his writs, although not in the form* of our charter, as we could desire, we have obeyed the same, and considered what he has laid before us, viz. an answer to the late queen's letter, and our proprietary's promise upon his restoration to his government; and are heartily and unanimously willing and ready to perform our duty therein, so far as in us lies, if the governor would be pleased to settle us in our former constitutions, enjoyed by us before this government was committed to governor Fletcher's trust."

This was followed, on the governor's part, with a demand of money as before for the relief of the Indians: and the assembly choosing to take care of the provincial constitution first, required the governor to appoint a committee of the council to join with a committee of the assembly for that purpose: such a joint committee was appointed accordingly; who agreed in recommending this expedient, "that the governor, at the request of the assembly, would be pleased to pass an act (of settlement must be understood) with a salvo to the proprietary and people; and that he would also issue out his writs for choosing a full number of representatives on the 10th of March next ensuing, to serve in provincial council and assembly according to charter, until the proprietary's pleasure should be known therein; and that if the proprietary should disapprove the same, that then the said act should be void, and no ways prejudicial to him or the people in relation to the validity or invalidity of the said charter."

To this expedient the house unanimously agreed. A bill of settlement, and a money bill, were thereupon ordered and prepared; and after some temperament, reported, agreed to, and passed.

The money bill was for raising three hundred pounds for support of government, and relieving the distressed Indians.

In the act of settlement, the rotation principle was wholly dropped. Elections both of council and assembly were to be annual and certain: the time of election, March 10th: the time of sitting, May the 10th: the members of council for each county two, for the assembly four: they were to be of the most note for virtue, wisdom, and ability, and otherwise qualified in point of fortune and residency. In the governor or his deputy, and the said assembly and council, the government was placed. The governor or his deputy was to preside in council; but at no time perform any act of state whatsoever, but by and with the advice and consent of the council, or a majority thereof: that two thirds were to be a quorum in the upper walk of business, and one third in the lower: that the assembly should have power to propose bills as well as the council: that both might confer on such as either of them should propose: that such as the governor in council gave his consent to, should be laws: that the style of those laws should be,—By the governor, with the assent and the approbation of the freemen in general assembly met: the duplicates thereof should be transmitted to the king's council, according to the late king's patent: that the assembly should sit on their own adjournments and committees, and continue to prepare and propose bills, redress grievances, impeach criminals, &c. till dismissed by the governor and council; and to remain during the year liable to serve upon his and their summons; should be allowed wages and travelling charges; two thirds to make a quorum; all questions to be decided by a majority; affirmations to be admitted in all courts, &c. instead of oaths, where required; all persons in possession of lands by purchase or otherwise under any legal or equitable claim, so to continue; sheriffs and their substitutes to give security for office behaviour; elections were to be free, regular, incorrupt, &c. no member being permitted to serve without wages, or for less wages than by this act appointed, &c. Neither the form or effect of this act was to be diminished or altered in any part or clause thereof, contrary to the true intent or meaning thereof, without the consent of the governor and six parts in seven of the freemen in council and assembly met:

* They had been issued upon Fletcher's plan before specified.

it was to continue and be in force till the proprietary should by some instrument under his hand and seal, signify his pleasure to the contrary: and it was provided, that neither this act, nor any other should preclude or debar the inhabitants of this province and territories from claiming, having, and enjoying any of the rights, privileges, and immunities, which the said proprietary for himself, his heirs and assigns, did formerly grant, or which of right did belong unto them the said inhabitants by virtue of any law, charter, or grant whatsoever, any thing therein contained to the contrary notwithstanding.

A new application from governor Fletcher for farther assistance, and the report of a committee of the assembly to whom it was referred (urging the infancy, poverty, and incumbered state of the colony in excuse for noncompliance) together with an act for ratifying and confirming the acts and proceedings of the last year's assembly by some persons questioned and misrepresented, are all the *remains* of what passed in the assembly of 1697.

Nor does any thing material occur in the years 1698, 1699, till the arrival of the *proprietary* from England.

January 25th, 1699–1700, the assembly being convened for the second time, was told by the proprietary in person, that he had so convened them chiefly to reinforce the former laws; or by a new law more rigorously to discourage piracy and forbidden trade: misdemeanours which he said had exposed the government to much odium at home, which he had been much pressed by his superiors to correct, and which he, therefore, pressed most *concernedly* upon them.

Both these points were immediately referred to the consideration of two several committees; and one of their own members, son-in-law of their late lieutenant-governor Markham, proving to be the most obnoxious person on the first of these accounts, they proceeded so far as to commit him, till satisfied by the governor that he had given sufficient security for his appearance to answer what complaints should be brought against him.

They also took care to purge themselves on the head of forbidden or illicit trade, which appears to have been done in so effectual a manner, that the governor himself could not avoid co-operating with the council in their justification. To prove which, his answer to their several addresses (concerning a fit person to be provincial treasurer; cautions to avoid confusion in the next election, which was to be on a new model, as also the expediency of the advice and consent of the council and assembly thereon; and *false information* sent to England against them) here inserted, will be sufficient: to wit,

"First, as to the receiver or treasurer, that he would consider of it, and would take care to please all by his choice of a fit person: as to their address to avoid confusion in the next election, that he consented to the request of the house, and ordered by general consent of council and assembly, minutes to be made in both: that, at the next election, three should be chosen for council in each county, and six for assembly; the election to be on the usual day; but reserving to himself the specification of the term the former were to serve for, which was to be expressed in the writ: and that as to the other point of *false information* sent against the colony to England, the unseasonable time of the year would not suffer the merits of the case to be thoroughly discussed, but that all the representatives both of council and assembly, had agreed in drawing up some general defence for the present."

And before their separation it was drawn up and presented to the governor accordingly.

The next general assembly met at the usual time, and was in every respect an extraordinary one: extraordinary for the number of members superadded in the manner just recited; extraordinary for an occasional law they passed at the instance of the governor and council, to prolong the present sessions beyond the time limited by charter; and extraordinary for the debates concerning another new frame of government, which continued through the whole course of it, without producing any satisfactory temperament at last.

Found intractable, after a month's practice, they were dissolved; and in October following, a new assembly was summoned; not as before to consist of thirty-six members, but of twenty-four; that is to say, four instead of six for each county.

The place of meeting was also different; for instead of assembling as usual at Philadelphia, the members were convened at Newcastle, perhaps only to gratify the inhabitants of the *territories*, at a time when extraordinary demands were to be made upon them for the gratification of the proprietary governor.

At the opening of this assembly, the governor said, he had called them upon urgent occasions: that they were in want of a frame of government; a body of laws; a settlement of property; and a supply for the support of government: adding, that he would give them all the assistance in his power.

With the body of laws they began, and made a considerable progress in the work; but the frame of government again met with as many difficulties as before. The conditions of union between the *province* and the *territories*, in particular, had like to have produced an immediate separation: and the dispute which arose concerning equal privileges or equal voices in the representative, could be no otherwise compromised than by referring the issue to the next general assembly.

The points which more immediately con-

cerned both branches of the legislature, were the settlement of property and the supply. In the latter the governor himself was deeply interested, and almost every landholder of the colony in the former. These, therefore, were to be first despatched; and, accordingly, a bill for the effectual establishment and confirmation of the freeholders of both parts of the united colony, their heirs and assigns, in their lands and tenements; together with two others; one for raising of one penny per pound, and six shillings per head for support of government, &c. and one for granting and raising to the proprietary and governor two thousand pounds, upon the real value of estates real and personal, and another six shillings poll-tax; of which more than a moiety was paid by the county of Philadelphia alone. Nor ought it to be forgotten, that in the preceding session four pence in the pound and twenty-four shillings per head had been demanded for these services; and that as they paid by halves, the proprietary performed by halves; as the mention hereafter made of his charter of property will demonstrate.

The same assembly being again convened in August at Philadelphia, in consequence of a letter from his majesty, requiring an aid of three hundred and fifty pounds sterling, towards the fortifications to be raised on the frontiers of New York, they excused themselves from complying; urging that the great sums lately assessed upon the colony by way of imposts and taxes, over and above the arrears of quit-rents, had rendered them incapable: and these excuses were readily admitted by the government; so that the proprietary interest in this instance undeniably supplanted the royal: and private interest public service.

In September, 1701, the proprietary convened another assembly, consisting of four members for each of the six counties, agreeable to the law, for ascertaining the number of members, lately passed at Newcastle; and though he had in the last evaded giving a copy of his speech in writing to the house, as not being his usual way, went out of his way for this once to do it now.

Some apology he made for calling them together a month sooner than they would have met of course: assigned as a reason, the necessity he was under, through the endeavours of the enemies to the prosperity of the colony, to go for England, where, taking the advantage of his absence, some had attempted to undermine his government: talked as if the voyage was disagreeable to him; as if the quiet of a wilderness was all his ambition; as if his purpose had been to stay with them always, or at least till he could render every body safe and easy: said his heart was with them, whatever some people might please to think; that no unkindness or disappointment should, with submission to *God's* providence, ever be able to alter his love to the country, and his resolution to return and settle his family and posterity in it, &c. "Think, therefore, (continued he in the most captivating style and manner that ever was made use of) since all men are mortal, of some suitable expedient and provision for your safety as well as in your privileges as property, and you will find me ready to comply with whatsoever may render us happy by a nearer union of our interests. Review again your laws! propose new ones that may better your circumstances; and what you do, do it quickly! remembering that the parliament sits the end of the next month, and that the sooner am there, the safer I hope we shall all be here."

He then returned to the three hundred and fifty pounds sterling, demanded by the king: imparted to them the happy issue of colonel Fletcher's conferences with the *five nations;* and again recommended unanimity and despatch, since it might contribute to the disappointment of those who had long sought the ruin of their young country.

The assembly returned a short but affectionate and respectful answer; after which they presented an address to him, consisting of twenty-one articles: the first desiring, that, on his departure for England, due care be taken, he might be represented there by persons of integrity and considerable known estates, who might have full power and authority not only to grant and confirm lands, &c. but to compensate *short* and resume *over measure.*—The second, that he would grant them such an instrument as might absolutely secure and defend the freemen of the province, by them represented, in their estates and properties, from himself, his heirs and assigns for ever, or any claiming under him, them, or any of them; as also to clear all Indian purchases and others.—And the last, that the bill of property, passed at Newcastle, might be inserted in the charter, with such amendments as should be agreed on.

To each of the whole twenty-one he returned a special answer; and to the three recited, those that follow. "To the first: I shall appoint those in whom I can confide, whose powers shall be *sufficient* and *public* for the security of all concerned; and I hope they shall be of honest character without just exception, to do that which is right between you and me." ['Tis strange the crown should not be so much as mentioned.] "To the second: much of it is included in my answer to the first; however, I am willing to execute a public instrument or charter to secure you in your properties, according to purchase and the law of property made lately at Newcastle, excepting some corrections and amendments absolutely necessary therein: and to the last,

I agree that the law of property made at Newcastle shall be inserted in the charter with requisite amendments."

How short these expressions fell of his speech is obvious; nor is it any honour to himself or his laws, that the latter stood in need of so many amendments; and that the freemen found reason to think they could not take too many precautions to secure themselves against him.

To these answers of the governor, the assembly returned as many replies; most of them expressing their acceptance and acknowledgments: and the matter of the first being at all times equally reasonable, deserves to be particularly remembered, to wit, "that the commissioners thou art pleased to promise, be invested with *full* and *complete power*, and be obliged by some clause in the commission to act without refusal or delay, according to the full and public powers thereof; and that it would please thee to nominate the persons to the assembly."

The governor, on the other hand, whether out of artifice or complaisance is hard to say, would have induced them to name his substitute themselves: but, they as artificially or complaisantly excused themselves; saying, they did not pretend to the knowledge necessary for such a nomination, and that they desired to leave it to the governor's pleasure.

While the charter of privileges was under consideration, the late breach between the members of the province and those of the territory was again opened, and soon grew wider than ever.

The territory-men were for obtaining some powers or rights peculiarly favourable to themselves; which the others thinking unreasonable, were not willing to allow: and not being able to carry their point, the members for the territory left the house.

The proprietary interposed his authority to bring about an accommodation; and for the present prevailed. But the same spirit of animosity still remained; and what with the hurry the governor was in to set sail, and what with the warm dispute which arose between him and the assembly concerning the allowance to be made to such as had defective measure in their lands, the remainder of a session, so plausibly opened, and in which the constitution was to be finally settled, was soured with expostulations and reproaches even to the last moment of it: and the governor and his freemen at last parted like people who were equally glad, they had made so much of, and were now to be separated from each other.

And thus the course of time has brought us to that frame or system which, in subordination to the royal charter, is, at present, the rule of government in Pennsylvania.

In May, 1700, the former had been surrendered into the hands of the governor, by six parts in seven of the assembly, under a solemn promise of restitution, with such alterations and amendments as should be found necessary.

On the 28th of October, 1701, when the governor was so near his departure that it might almost be said he had one foot on board, this promise was made good; the council, the assembly, (the *provincial* part of it, that is to say,) and several of the principle inhabitants of Philadelphia attending.

The *charter* of *privileges* granted by William Penn, Esq. to the inhabitants of Pennsylvania, and *territories*, this important instrument is called; and the main purport of it is as follows, to wit: "that because no people could be truly happy, though under the greatest enjoyment of civil liberties, if abridged of the freedom of their consciences, as to their religious profession and worship, no inhabitant, confessing and acknowledging *one almighty God*, and professing himself obliged to live quiet under the civil government, should be in any case molested or prejudiced in person or estate: that all persons professing to believe in *Jesus Christ* the Saviour of the world, promising when required, allegiance to the king, and taking certain attests by a certain provincial law provided, should be capable to serve the government either legislatively or executively: that an assembly should be *yearly* chosen by the freemen, to consist of four persons out of each county, of *most note* for *virtue*, *wisdom*, and *ability*; or of a greater number, if the governor and assembly should so agree; upon the first of October for ever, and should sit on the 14th following, with power to choose a speaker and other their officers, to be judges of the qualifications and elections of their own members, sit upon their own adjournments, appoint committees, prepare bills, impeach criminals, and redress grievances, with all other powers and privileges of an assembly, according to the *rights* of the *freeborn* subjects of England, and the customs observed in any of the king's plantations in America: that two thirds of the freemen so chosen should have the full power of the whole: that the said freemen in each respective county, at the time and place of meeting for electing representatives, might choose a double number of persons to present to the governor for sheriffs and coroners, to serve for *three* years, if so long they should behave themselves well, out of whom the governor was to nominate *one* for each office, provided his nomination was made the *third* day after presentment, otherwise the person first named to serve; and in case of death or default, the governor to supply the vacancy: that three persons should be nominated by the justices of the respective counties, out of whom the governor was to select *one* to serve

for clerk of the peace, within *ten* days, or otherwise the place to be filled by the first so nominated: that the laws of the government should be in this style, viz.—*By the governor, with the consent and approbation of the freemen in general assembly met:* that all criminals should have the same privileges of witnesses and council as their prosecutors: that no person should be obliged to answer any complaint, matter or thing whatsoever, relating to *property*, before the governor and council, or in any other place but in ordinary course of justice, unless in appeals according to law: that the estates of suicides should not be forfeited: that no act, law, or ordinance whatsoever should at any time hereafter, be made or done to alter, change, or diminish the form or effect of this charter, or of any part or clause therein, according to the true intent and meaning thereof, without the consent of the governor for the time being, and six parts in seven of the assembly met: that the first article relating to liberty of conscience should be kept and remain without any alteration inviolably for ever: that the said William Penn, for himself, his heirs and assigns, did thereby solemnly declare, grant, and confirm, that neither he, his heirs or assigns, should procure, or do any thing or things whereby the liberties in this charter contained and expressed, nor any part thereof, should be infringed or broken; and, that if any thing should be procured and done by any person or persons contrary thereto, it should be held of no force or effect."

Thus, though much remained of the first institution, much was taken away. The people had no longer the election of the council; consequently all who, for the future, were to serve in that capacity, were to be nominated by the governor; consequently were to serve on what terms he pleased. Instead of having but three voices in seventy-two, he was left single in the executive, and at liberty to restrain the legislative, by refusing his assent to their bills whenever he thought fit.

On the other hand, the assembly, who at first could not propound laws, though they might amend or reject them, were put in possession of that privilege; and, upon the whole, there was much more room for acknowledgments than complaints.

How much soever the governor had grown upon Mr. Penn, and how much soever his concern for others had worn off, when raised to a sphere above them, it is plain he had not forgotten his own trial, nor the noble commentary upon *Magna Charta*, which, in his tract called, *The people's ancient and just liberties asserted*, he had upon that occasion made public; wherein he says,

"There were but two sorts of government: will and power; or, condition and contract. That the first was a government of men, the second of laws. That universal reason was and ought to be, among rational beings, universal law: that of laws, some were fundamental and immutable; some temporary, made for present convenience, and for convenience to be changed. That the fundamental laws of England were of all laws most abhorrent of will and pleasure: and, that till *houses should stand without their own foundations*, and Englishmen *cease to be* Englishmen, *they could not be cancelled, nor the subjects deprived of the benefit of them.*"

Such as it was, by the freemen of the *province* it was thankfully accepted, but by those of the *territory* unanimously declined; and in this divided condition this new *Lycurgus*, as *Montesquieu* calls him, left them.

Andrew Hamilton, Esq. (not the celebrated barrister of that name) was the person appointed to be his substitute; and the principal effort of his administration was to bring about a reunion, which being at length found impracticable (the *territory*-men still persisting in their refusal of the charter) the *province*, in virtue of that charter, claimed a separate representative of their own, which in point of number was fixed at eight members for each of the three counties, and two for the city of Philadelphia, now so constituted by the proprietary's special charter; and after duly qualifying themselves according to law, their first resolution was,

"That the representatives or delegates of the freeholders of this province, according to the powers granted by the proprietary and governor by his charter, dated the eighth day of October, *Anno Domini* 1701, may meet in assembly on the fourteenth day of October, yearly, at Philadelphia, or elsewhere, as shall be appointed by the governor and council for the time being, and so continue on their own adjournments from time to time during the year of their service, as they shall find occasion, or think fit, for preparing of bills, debating thereon, and voting, in order to their being passed into laws; appointing committees, redressing of grievances, and impeaching of criminals, as they shall see meet, in as ample manner as any of the assemblies of this province and territories have hitherto at any time done, or might legally do; as effectually, to all intents and purposes, as any of the neighbouring governments under the crown of England have power to do, according to the rights and privileges of the freeborn subjects of England, keeping to the rules and prescriptions of the parliament of England; as near as may be, respecting the infancy of the government and the capacities of the people: and that the said assembly, as often as the governor for the time being shall require, attend on him, in order to legislation: and to answer all other just ends of assemblies on any emergencies or reasons of state; but

shall not be subject at any time to be by him adjourned, prorogued, or dissolved."

This was the state of things when John Evans, Esq. appointed deputy-governor on the death of Mr. Hamilton, arrived in the province, in the beginning of the year 1704.

What his commission and instructions were does not appear; but having convened the representatives both of the province and territories, to meet him at the same time in his council-chamber, he affected to be surprised at finding them in separate states; said her majesty considered them as one entire government; and earnestly pressed them both to come to an amicable agreement, not without insinuation, that neither of them would otherwise be in a condition to act at all.

The provincials, in return, intimated, that they should be heartily glad of a farther union with the territories if it could be obtained without prejudice to their constitution or to their charter: said, those of the territory had been the occasion of inserting that clause in their charter by which they had been enabled to act separately: made professions of so much good will and good neighbourhood as might prevent all inconveniencies from their separation: that they had appointed a committee to confer with them, &c.

Conferences were accordingly opened between the two houses, which produced two papers; one from the territory members, not over ingenuous in its contents, offering now to receive the charter they had till then rejected, and to co-operate with those of the province: and the other, a reply from the provincials, charging them with inconsistency, and declaring, that seeing they were by their formal refusal necessitated to form themselves into a distinct assembly, and were now established accordingly, it was not in their power, as they conceived, without a violation of the charter and trust reposed in them, to entertain any expedient to reconcile their request of an union with the said charter, &c.

Thus all negotiation on this head came to an end, and the provincials were already in disgrace with their new governor, for showing so little regard to his recommendation.

A bill to confirm their charter, and some proceedings to correct the exorbitancies of the proprietary land-office, rendered them yet farther obnoxious; and they also were in their turns exasperated by some intemperate censures passed on their proceedings by one of the governor's council.

Nor was this all; the bill to confirm their charter, &c. was sent back, with such amendments as appeared to the house destructive to the present constitution, and for that reason drew from them the following unanimous resolutions and address founded thereon: to wit,

"Resolved, that what is proposed for amendment in the fourth and fifth pages of the bill, will render the said charter useless and ineffectual, and bring an odium upon the proprietary, who granted this instead of other charters, wherein were larger and greater privileges granted to the first adventurers and purchasers of land in this province, which they expected (as it was their undoubted right) to enjoy, as well as the lands they bought; therefore this house cannot admit of those amendments; because they are also destructive to the present constitution, by which the representatives of the free people of this province are now assembled, and are resolved to assert and maintain.

"Resolved, that the method of passing bills by the governor should be adjusted and settled; but whether the governor thinks fit to be in council or not at the passing of bills is submitted to him.

"Resolved, that it is consistent with the late king's letters patent, and the said charter of privileges, that the council (as now chosen) should have a share in the legislation, unless it be when the government is in the council; which this house agrees may be upon the death of the governor, unless other provision be made by the governor in chief; and that a clause may be added to the bill for that purpose."

"To John Evans, Esq. lieutenant-governor, &c. &c.

"The address of the assembly of the said province, sitting at Philadelphia, the twelfth day of August, 1704,

"In all humble manner showeth,

"That this assembly, having taken into their serious consideration the matters yesterday debated in the conference, relating to the proposed amendments to the bill intituled, *An act, for removing and preventing all questions and disputes concerning the convening and sitting of this assembly*, &c. as also for confirmation of the charter of privileges, do find nothing advanced that can reconcile the said amendments to the constitution of our charter; and thereupon do come to this resolve,—That to admit of the power of dissolution, or prorogation in the governor, will manifestly destroy or frustrate the elections settled by the charter, which is a perpetual writ, supported by the legislative authority of this government, and will make way for elections by writs grounded upon a prerogative, or rather a pre-eminence, which the proprietary and his deputy are by charter debarred to resume.

"But to take off the jealousies that may arise upon that part of the charter and bill, which impowers us to sit upon our own adjournments, we are willing to settle and limit the times of adjournment and sitting; and in order thereunto propose to the governor,

"That a clause be added to the aforesaid

bill, that the time of the assembly's sitting from the fourteenth of October, yearly, shall not exceed twenty days, unless the governor for the time being and assembly shall agree to a longer time; and the adjournment from that time shall not be less than three months; and so for every time of sitting, and every adjournment within the year, respectively."

The return to this was as follows: viz.

"From the governor in council to the assembly.

"The governor upon the best advice he can have upon the point of dissolution and prorogation, cannot be of opinion, that the proprietary has granted away that power; and that therefore it is very unsafe for him to do it. He is very unwilling to have any misunderstanding with the assembly, and shall always be inclinable to make things easy in this, as well as other points; and desires to leave it till further directions can be had from England, to which he thinks it is fit the matter should be referred: and in the mean time recommends to the assembly, to proceed to the despatch of such other business of importance as lies before them, and the exigencies of the government necessarily require; and to which the opportunity now presented to them ought to invite and encourage them."

And this was the rejoinder of the assembly.

"To John Evans, Esq. lieutenant-governor, &c.

"The address of the representatives, &c.

"Humbly showeth,

"That we have taken into our serious consideration thy written message yesterday, relating to the bill for confirmation of the charter of privileges, &c.

"And since the points of dissolution and prorogation are by thee asserted, and the power of this assembly to sit upon their own adjournments, first brought into question by the council in October last, which occasioned us to proceed thus far in explaining and settling our constitution by charter; we conceive we cannot safely let it drop at this time (and remain disputable) without violation of, or injury to, our said present constitution; and consequently it will not be so proper to proceed to the despatch of other affairs of importance before us, whilst our foundation remains unsettled.

"That allowing what one of the members of council who came with the message was pleased to observe to us, that the proprietary had not given away the power of dissolution, &c. by the charter (*in express words*) yet that it could not be intended to be reserved by him, seems, evident to us for the following reasons:

"First, because it could at no time be put in practice, without frustrating the very design of the grant, that we should have an annual standing assembly.

"Secondly, that whenever a dissolution should happen, the governor, not being capable to call a new one by writ, as the same member of council rightly observed, the remaining part of that year the province must be destitute of an assembly, and the governor of power to call one, whatever commands from the crown or other extraordinary occasions may happen, unless (as the said member was pleased to observe) by some such means as would need the power of a subsequent assembly, to confirm all that they should have occasion to act or do.

"Thirdly, that the proprietary, in the preamble of this present charter, having been pleased to remember and acknowledge his promise made to the assembly upon the delivery of the former charter, that he would either restore us that or another better adapted to our circumstances: therefore, in assurance of his good and sincere intentions, this charter must be such an one.

"Fourthly, by the former constitution, it is very plain there could be no dissolution; because the same members of assembly, and no others, were liable to be called at any time within the year: and in many years' experience, no inconvenience found to arise thereby; nor was that any controverted point between the proprietary and the people, for the rectifying whereof another charter was thought necessary, but other matters not unknown to some of the council.

"Fifthly, and lastly, as a clear proof that the proprietary never intended to reserve the power of dissolution, it may be remembered, that at the close of the sessions of assembly, in the year 1701, when the members being then chosen, by writs, requested a dissolution, the proprietary answered, he would not do it; nor could he answer it to the crown, to leave the province without a standing assembly.

"Upon the whole, we take leave to inform thee, that since this assembly (having long waited in hopes of the passing of this, with other bills lying before thee) is much straitened in time, the season of the year urgently calling most of the members from their attendance; and considering the governor's great indisposition is an obstruction of business; and that another election is now near at hand; that it is the inclination and desire of this house, that all other business might be waived till the meeting of the next assembly; and that in the mean time, the governor would be favourably pleased further to consider the aforesaid points."

Impelled also to discharge their minds in full to the *proprietary* himself, they agreed, *nem. con.* to nine several heads of complaint, which were entered in their minutes as follow, to wit:

"First, that the proprietary at the first setling of this province, promised large privileges, and granted several charters to the people; but by his artifices brought them all at his will and pleasure to defeat.

"Secondly, that dissolution and prorogation, and calling assemblies by his writs, impowered by his commission to his present deputy, and his orders to his former deputies and commissioners of state, are contrary to the said charters.

"Thirdly, that he has had great sums of money last time he was here, for negotiating the confirmation of our laws, and for making good terms at home for the people of this province, and ease his friends here of oaths, &c. but we find none of our laws are confirmed, nor any relief against oaths; but an order from the queen to require oaths to be administered, whereby the *quakers* are disabled to sit in courts.

"Fourthly, that there has been no surveyor-general since Edward Pennington died, but great abuses by surveyors, and great extortions by them and the other officers concerned in property, by reason of the proprietary's refusing to pass that law proposed by the assembly, in 1701, to regulate fees, &c.

"Fifthly, that we are like to be remediless in every thing that he hath not particularly granted, or made express provision for; because the present deputy calls it a great hardship upon him, and some of the council urge it as absurd and unreasonable to desire or expect any enlargement or explanation by him, of what the proprietary granted.

"Sixthly, that we are also left remediless in this, that when we are wronged and oppressed about our civil rights, by the proprietary, we cannot have justice done us; because the clerk of the court being of his own putting in, refuses to make out any process; and the justices, by and before whom our causes against him should be tried, are of his own appointment; by means whereof, he becomes judge in his own case, which is against natural equity.

"Seventhly, that sheriffs and other officers of the greatest trust in this government, which the proprietary hath commissionated, being men of no visible estates; and if any of them have given security, it was to himself; so that the people whom these officers have abused and defrauded, can reap no benefit of such security.

"Eighthly, that although the commissioners of property have power by their commission to make satisfaction where people have not their full quantity of land according to their purchase, yet they neglect and delay doing right in that behalf.

"Ninthly, that we charge the proprietary not to surrender the government, taking notice of the intimation he had given of making terms, &c. and let him understand how vice grows of late."

And they ordered a representation to be drawn up consequent thereto, and sent by the first opportunity.

Parts of this are already before us; and, as a suggestion was afterwards made, that it contained other matter than was comprehended in the articles, the remainder deserves to be inserted here.

"That upon thy being restored to the government, thou required thy lieutenant to govern us according to charter, which, by reason of Fletcher's interruption, became impossible before thy orders reached us, and so the government fell under great confusion again: nor was the administration of thy propriety much better managed, because thou put some in that commission with whom the rest would not act; and at last the office of property and surveyor-general came to be shut up, and thou kept them so whilst thou sold lands to the value of about two thousand pounds sterling, and gave thy warrants in England for surveying the said land; and also got great tracts of land laid out or secured for thyself and relations, besides several valuable parcels which should have been laid out for the purchase, but were reserved by thy surveyors, whether for thee or themselves we know not: however thou appropriated those lands to thyself, by the name of *concealed lands*, whereas in truth they were concealed from the purchasers, who were to have their lands laid out contiguous one to another, and no vacancies left between them: and thou wast to have only thy tenth, as it fell, according to the concessions thou made with thy first adventurers; and if thou took it not up so, it was thy own (not their) fault; but the other was a manifest injury to many of them as above declared.

"That upon thy last arrival here, after all the hardships and disappointments we had laboured under, we hoped to enjoy the fruits of thy former promises and engagements; but instead of that, we found thee very full of resentment, and many of our applications and addresses, about our just rights and properties, were answered by recriminations or bitter invectives: and we found that the false insinuations and reproaches, that our adversaries had cast upon the province, with respect to false trade and harbouring pirates, had made so great an impression upon thee, that thou rather believed them than thy honest friends.

"And when thou entered upon legislation, thou wast pleased to repeal all the laws that were made in colonel Fletcher's time, which were approved by the king or queen, as we were informed, and as some of us gathered by the account thou gave of them, viz. that chancellor Somers had sent for thee to know

what thou had to object against any of those laws; and if it had not been for thee none of them had passed, or words to that effect: and not only so, but the people being minded to surrender the said second charter, upon thy promise to give them a better in lieu of it; and under pretence of passing an act for confirming and securing their lands, &c. thou obtained liberty to resurvey all the lands in the province, and to bring the people to terms for the overplus; so that by this stratagem, the warrants, surveys, and new patents, cost the people as much, and to some more, than the first purchase of their lands, besides their long attendance upon thy secretary and surveyors to have their business done: but before thou would pass that act, it must be accompanied with an impost or excise, and a two thousand pounds bill besides: and all this thou esteemed but inconsiderable, when thou compared it with the vast charge thou had been at, in the administration and defence of this government, since the year 1682, though we know thy stay here at first coming was not above two years, but went home about the difference between thee and Baltimore, concerning the bounds of the lower counties, and did not return till the year 1699; excusing thy stay by thy service to the nation of England in general, and to thy friends there in particular, (as appears by thy letters from time to time) whilst the interest of this province was sinking, which might have been upheld by the many wealthy persons that were inclined to transport themselves here, after the rout of Monmouth, if thee had then came over according to thy repeated promises: and how far thy stay has either effected what thou went about, or contributed to the establishment of the inhabitants here in their just rights and liberties, and properties, we leave thee to demonstrate, and the world to judge: in the mean time, we desire thee to consider better what to place to the account of this province; and do not forget that no part of thy pretended charges was expended in paying some of those who acted under thee, in the administration here, one of whom, viz. Thomas Lloyd, served thee in that station about nine years of thy absence, which thou leaves, it seems, for the country to discharge.

"That after thou had managed these points, and was sent for to England, thou granted the third charter of privileges, by which we are now convened; as also a charter to incorporate the city of Philadelphia, and signed a charter of property, but refused to order thy seal to be affixed thereunto, till thou had advised upon it in England: nevertheless, thou promised under thy hand, that thou would confirm the first part of it relating to titles of land, but thou sent thy order, under hand and seal, dated within six months after, to countermand the sealing thereof.

"That after the laws were completed for raising all the said taxes and imposts, thou proposed that if thy friends would give thee a sum of money, thou promised to negotiate their affairs at home to the best advantage; and endeavour to procure the approbation of our laws, and a general exemption from oaths: we find that considerable sums have been raised by way of subscription and benevolence, for that service; part thou received before thou went, and more have been received since by thy secretary; but we had no account that our laws are approved, nor had we as much as a letter from thee, nor any other intimation but by thy secretary's letters, which he thought fit to communicate by piecemeals, whereby we understand, thou hast been making terms for thyself and family: and by what we gather, thou hast been upon surrendering the government; nor are thy friends here eased of oaths, but on the contrary, an order from the queen, requiring oaths to be administered to all persons who are willing to take them in all judicatures, whereby the people called quakers are disabled to sit in courts.

"That by the last charter or privileges, thou established an annual election of representatives for assembly, and that they should continue and sit upon their own adjournments; yet by thy commission to thy present deputy, John Evans, thou did, in a direct opposition to the said charter, give him power not only to call assemblies by his writs, but to prorogue and dissolve them as he should see cause; and also reserved to thyself, though in England, thy final assent to all bills passed here by thy deputy: we suppose thou hast not forgot, that what rendered the former charter inconvenient, if not impracticable, was chiefly that colonel Fletcher's interruption had extinguished the rotation of the council, and next to that, the proposals of laws by the council, in presence of the governor; as also the instability of the *lower counties*, which we had before experience of, and whose result was then doubted, as hath since happened: but that annual standing assemblies, liable only to the dismission and call of the governor as occasion required, was never found an inconveniency, nor assigned as a reason for changing the said former for the present charter and should that of dissolution be introduced, it would frustrate the constitution, because if a dissolution should happen, the province might be a great part of the year without an assembly, and the governor without power to call one, whatsoever commands from the crown, or other occasions may happen; for that the election being fixed by charter, which is in nature of a perpetual writ, and has the authority of a law: if it could be superseded by the governor's writ, which is but an act of state, and merely temporary, it would be of

pernicious consequence to the province as well as thyself: and of this thou seemed very sensible, when being desirable by the assembly, upon the close of the session in the year 1701, to dissolve them, (being then called by writs) thou told them, thou wouldst not do it, for that thou couldst not answer to the crown to leave the province without a standing assembly.

"That as the exemption from any dissolution or prorogation, seems to be an inseparable consequent of thy grant, as well as our constant practice upon the former charter, which this was by thy promise to exceed, so upon an attempt made by the council, to prorogue us in October last, we have thought it our duty to prepare a bill for ascertaining, explaining, and settling our present constitution; which we having presented to thy deputy for his assent, he finding that the power of dissolution and prorogation is not in express words granted away by charter, as also the inconveniency thereof with his said commission, after several conferences thereupon, had with him and his council, he thought fit to advise us to forbear the farther pressing it, till we should hear from thee; therefore he being unwilling to pass the said bill by us judged so necessary, and the very foundation of our present constitution, we could not think it proper to proceed to perfect any other business, whilst that remained unsettled: nor do we suppose any thing will be done in legislation either by the present or succeeding assemblies, till the difficulties we labour under herein be removed, either by thy speedy order, or by thy deputy without it; seeing to proceed upon other matters, would be to raise a superstructure before the foundation were well laid; nor do we look upon it very advisable for us to proceed far in legislation, until thou repeals those parts of thy lieutenant's commission, relating to prorogation and dissolution of assemblies, for the reasons before given; as also concerning thy final assent to laws, which we conceive to be very unreasonable in itself, and a great abuse and violation of our constitution, that thou should offer to put three negatives upon our acts, whereas by our first charter, we had none but that of the crown; and how thou gained another to thyself, we have before showed thee, but now to bring us under three, seems a contrivance to provoke us to complain to the queen, that thou art not effectually represented here, and make that a motive for her to take us under her immediate care and protection, which would make thy surrender in some measure our act, which if thou should do without the consent of the landholders and inhabitants of this province first obtained, would look too much like treachery.

"That it appears, by several petitions now before us, that very great abuses have been and are put upon the inhabitants, and extortions used by thy secretary, surveyors, and other officers, concerned in property as well as courts, which might have been prevented or sooner remedied, had thou been pleased to pass the bill proposed by the assembly in the year 1701 to regulate fees; as also the want of a surveyor-general, which is a great injury and dissatisfaction to the people; as is likewise the want of an established judicature for trials between thee and the people; for if we exhibit our complaints against thee, or those who represent thee in state or property, they must be determined by or before justices of thy own appointment; by which means, thou becomes, in a legal sense, judge in thy own cause, which is against natural equity: therefore, we propose, that a man learned in the laws of England, may be commissioned by the queen, to determine all matters, wherein thy tenants have just cause to complain against thee, thy deputies or commissioners; or else restore the people to the privilege of electing judges, justices, and other officers, according to the direction of the first charter, and intent of the first adventurers, and as the people of New England have by king William's charter: that thy commissioners of property, are very unwilling to make good the deficiencies of those lands thou hast been many years ago paid for (though thou gave them power so to do) and so great is the difficulty and trouble to get satisfaction in this particular, that it is better for one to forego his right, than wait on and attend the commissioners about it, unless the quantity wanting be very great.

"We have many other things to represent to thee as grievances; as thy unheard of abuses to thy purchasers, &c. in pretending to give them a town, and then by imposing unconscionable quit-rents, makes it worse by tenfold than a purchase would have been: also the abuse about the bank, and want of common to the town, and not only so, but the very land the town stands on, is not cleared of the Swedes' claims.

"These are the chief heads, which we thought fit at this time to lay before thee, earnestly entreating thy serious consideration of them, and that thou will now at last, after we have thus long endured and groaned under these hardships (which of late seem to be multiplied upon us) endeavour as far as in thee lies, to retrieve thy credit with us thy poor tenants and fellow-subjects, by redressing these aggrievances, especially in getting our laws confirmed, and also to be eased of oaths, and giving positive orders to thy deputy to unite heartily with us, upon our constitution; and that the charters thou granted us for city and country, may be explained, settled, and confirmed by law: and we further entreat, that effectual care be taken for the suppressing

of vice, which, to our great trouble we have to acquaint thee, is more rife and common amongst us since the arrival of thy deputy and son, especially of late, than was ever known before: nor are we capable to suppress it, whilst it is connived at, if not encouraged by authority; the mouths of the more sober magistrates being stopped by the said late order about oaths, and the governor's licensing ordinaries not approven by the magistrates of the city of Philadelphia, and the roast chiefly ruled by such as are none of the most exemplary for virtuous conversation: thy positive orders in the premises, will be absolutely necessary to thy deputy, who thinks it unreasonable, and a great hardship on him, to give sanction to laws explanatory of thy grants, or to do any thing by way of enlargement or confirmation of aught, save what is particularly and expressly granted by thee, it being by some of his council urged as an absurdity in us to expect: and we desire that thou would order the licensing of ordinaries and taverns, to be by the justices, according to thy letter dated in September, 1697; and we hope we need not be more express in charging thee, as thou tenders, thy own honour and honesty, or the obligations thou art under to thy friends, and particularly thy first purchasers and adventurers into this province, that thou do not surrender the government, whatsoever terms thou may by so doing make for thyself and family, which we shall deem no less than a betraying us, and at least will look like first fleecing, then selling: but rather use thy utmost interest with the queen, to ease us in the premises: and if after thy endeavours used to keep the government, it be *per force* taken from thee, thou will be the clearer in the sight of God, and us the representatives of the people of this thy province, who are thy real friends and well wishers, as we hope is evident in that we have dealt thus plainly with thee."

It was but natural, that such a paper as this should deeply affect those it was levelled against; and that it should operate differently on persons differently made and differently situated.

Those best acquainted with the necessity of keeping the first principles of government ever before their eyes, and the danger of admitting the least departure from them, could not but be pleased with the plain and firm language of this remonstrance: while those apt to be so dazzled with the outside of things, that they were incapable of looking into their contents, were as much softened with concern for the *father* and *founder* of their community, and consequently inclined to think him hardly dealt by in it.

There is something in connexion and dependence which gives a secret bias to all we think and wish, as well as what we say: and in all disputes this must be duly allowed for on both sides.

Seven persons, some of them of the council, made their application by petition to the next assembly for a copy of it, but were flatly refused: and even when the governor himself in very high language required it, they were immoveable as before.

Willing as they might be to reclaim the *proprietary* to a due sense of his first obligations, they might be equally unwilling to expose him: and, agreeable to this, the assembly of 1706–7 in one of their remonstrances to the governor say, "that hoping the bill of courts then in dispute would have put an end to some of the grievances they had several years groaned under, they had hitherto forborn *publicly* to remonstrate; choosing rather to provide remedies for things amiss than to complain of them." Some concern they might also be under for themselves; their ascendancy was precarious: it depended on the good will of numbers: and the infirmity of nature above touched upon, might happen to operate more powerfully in the people, than the consideration of justice and safety to themselves and their posterity. The province, at this time, had moreover their reasons on account of oaths, a militia, &c. to apprehend some inconveniency if they fell under the immediate government of the crown; and therefore did not care to break with the proprietary entirely.

Nor was it long before, by partial and indirect practices, such as both influencing and awing the electors (facts publicly charged on the instruments of government by the assembly of 1706–7) that the governor obtained both an assembly and a speaker, almost as complaisant as he could wish. Nor ought it to be forgot, that his successor *Gookin* obtained such another in the year 1710.

In all matters of public concern something personal will interfere. Thus we find during this turbulent period, two names frequently occur, as opposite, in principle and purpose, and the oracles of their respective parties, to wit, David Lloyd, speaker of the assembly, and James Logan, secretary to the governor and council.

Logan insults the members of the assembly sent from the house on a message to the governor. The house resent it, complain of it, arraign his conduct in office, and proceed against him as a public delinquent. The governor, on the other hand, conceives an insuperable aversion to the speaker, points him out to the public as an interested, factious, dangerous person, treats him arrogantly at two several conferences, and complains of the house for not abandoning him to his resentments.

Thus heat kindled heat; animosity excited animosity; and each party resolving to be al

ways in the right, were often both in the wrong.

By the way, this——And it is necessary still to add, that all this while, the charter of *privileges* and that for the city of Philadelphia, as well as that of property, remained unconfirmed at home; and the people were plainly told by Evans, that, till both the proprietary and his governor were put upon *proper establishments*, they were not to expect the fruits of his favour and protection.

The last of those charters, the said governor, in one of his papers, was pleased to style a tedious bill of property, fitted so entirely to the people's interest, and with so little regard to the *proprietary*, that it seemed strange how reasonable men could, without confusion, offer it: and in another he discourses of it as a project of the *speaker's*, to incorporate the whole province, and take away near the whole power out of the hands of the *proprietary* and *governor*, and lodge it in the people.

To which the assembly replied in the remarkable words following;

"And as to what is said concerning the charter prepared at the proprietary's departure, the draughtsman has assured us, that no project or power is comprised in that charter but what was the proprietary's direction, perused and corrected by his cousin Parmiter, before it was engrossed, and afterwards signed by himself: but whether the proprietary designed thereby to reverse the method of the government according to an English constitution, and establish a republic in its stead, or leave the people to struggle with the *queen's governors*, which he *then* expected would be the consequence of the bill *then* moving in parliament against proprietary governments, the draughtsman cannot tell: but he well remembers, that the proprietary told him, that he held himself obliged to do what he could to confirm his tenants in their lands and properties, and give them all the* powers he could, as he was lord of this seignory, and much more to that effect."

And now, to finish on the head of the representation, which throws so much light on the first foundation of this colony, what afterwards passed in the assembly concerning it, candour requires should here be subjoined.

"But what, says governor Evans, I must not be silent in, is, that he, (the proprietary) highly resents that heinous indignity and most scandalous treatment he has met with in the letter, directed not only to himself, but also to be shown to some other persons disaffected to him, in the name of the assembly and people of this province, of which I have formerly demanded a copy, but was then denied it, under pretence (when it was too late) that it should be recalled: if that letter was the act of the people, truly represented, he thinks such proceedings are sufficient to cancel all obligations of care over them: but if done by particular persons only, and it is an imposture in the name of the whole, he expects the country will purge themselves, and take care that due satisfaction be given him."

The reader will observe that the letter is not complained of as scandalous, because of its *falsehood*, but because of its *freedom*, in which it must be understood consists the indignity.

And the assembly's reply was as follows:

"As to the representation or letter sent to the proprietary by order, or in the name of the *former* assembly, which he takes, it seems as an indignity, and resents it accordingly; it not having been done by this house, but being the act (or in the name) of a *former*, as we are not entitled to the affront, *if any be*, neither are we concerned in answering it: our part is only to lament (as we really do) that there should be *true* occasion for such representation; or, if none, that it should be offered to our proprietary, whom we both love and honour; and, therefore, we hope his obligations of care over us and the people of this province by no such means shall be canceled."

That this man's government should be one continued broil, from the beginning of it to the end, is proof sufficient, that Mr. Penn left his *frame* at least in a very imperfect state.

Nor were the people themselves insensible of it, nor more backward to declare their sentiments concerning it, than of the other parts of his conduct.

Evans, for example, having made use of the following clause in one of his papers to the assembly, to wit;

"The governor, at his arrival, found the people possessed of a charter, by virtue of which the present assembly now sits, containing the *frame* of government, settled solemnly, as he has reason to believe, between the proprietary and the people, because by the subscription, it is said to be *thankfully* accepted of by the assembly then sitting, and was signed not only by the proprietary, but by the speaker of the assembly, in the name of all those of the province (as it is affirmed) who were then present, and unanimously consenting, and is farther witnessed by the council; this, therefore, ought fully to conclude: for if the people could allege, that any thing more was their due, it ought at that time to have been fixed and settled; the assembly then sitting, as the governor is informed, hav-

* "William Biles acquainted this house, that Nathaniel Puckle had a letter from the *proprietary* to be communicated to several persons here, encouraging them to *insist* upon the privileges of their charter and laws, and not tamely give them up; and instanced what advantage it has been to the people of Rhode-Island, Connecticut, and other proprietary governments, to assert their rights," &c. *Votes of Assembly* for August 21, 1704.

ing fully considered and debated it; or if any demands, which it is imagined might further have been made, were not then granted, the governor cannot think it proper for him to intermeddle or to concern himself farther than by virtue of the king's letter patent, to the proprietary, and the proprietary's commission to him, with her majesty's royal approbation, to govern according to that charter, and the laws in force, &c.

The assembly thus replied;

"As to the present charter, which the governor found in being at his arrival, though it be *far short* of an English constitution, yet even that has been *violated* by several inroads made upon it: and if the governor cannot grant the just and reasonable demands of the people's representatives agreeable with an English establishment, there is cause to conclude, that the proprietary is not *fully* represented here: and, however the charter was received, yet it was not with such unanimity as is alleged, because *diminutive* of former privileges; neither was it prepared by the house of representatives, but done in *great haste*."——

"We are not striving for grants of power, but what are essential to the administration of * justice, and agreeable to an English constitution: and if we have not been in possession of this these twenty-four years, we know where to place the fault, and shall only say, it is high time we were in the enjoyment of our rights."

And lastly, the said assembly having drawn up two several remonstrances to the proprietary, reciting the particulars of their grievances and complaints against the said governor, took occasion in the last of them, dated June 10, 1707, to express themselves as follows.

"We, and the people we represent, being still grieved and oppressed with the mal-administration and practices of thy deputy, and the ill carriage, unwarrantable proceedings, and great exactions of thy secretary, are like to be destroyed by the great injustice and arbitrary oppressions of thy evil ministers, who abuse the powers given thee by the crown, and we suppose have too much prevailed upon thee to leave us hitherto without relief.

"That the assembly which sat here on the 29th of the sixth month, 1704, agreed upon certain heads or particulars, which, according to the order of that day, were drawn up in a representation, and was signed by the speaker, and sent thee by a passenger in John Guy's brigantine, who was taken into France, from whence the same representation was conveyed to thy hands; whereby thou art put in mind, upon what score the purchasers and first adventurers embarked with thee to plant this colony, and what grants and promises thou made, and the assurance and expectations, thou gave them and the rest of the settlers and inhabitants of this province, to enjoy the privileges derived from thy own grants and concessions, *besides* the rights and freedoms of England: but how they were disappointed in several respects, appears, in part, by the said representation, to which we refer; and become supplicants for relief, not only in matters *there* complained of which are not yet redressed, but also in things then omitted, as well as what have been lately transacted, to the grievous oppression of the queen's subjects, and public scandal of this government."

"We are much concerned, that thou conceived such displeasure as thou did against that assembly, and not in all this time vouchsafe to show thy readiness to rectify those things which they made appear were amiss: nor hast thou showed thy particular objections to the bills, which, with great care and charge, were then prepared, for confirming thy charters to this city and country, respecting both privileges and property, and for settling the affirmation instead of oaths: but on the other hand, we found, to our great disappointment, that thou gave credit to wrong insinuations against them, as appears by thy letter from Hyde-Park, dated the twenty-sixth of the twelfth month, 1704–5, wherein thou treated some particulars very unfriendly, and without any just grounds blamed the people's representatives, who, we perceive by their proceedings, were ready to support the government under thy administration, and desired nothing but to have their just rights, privileges, and properties confirmed, the judicatories regularly established, the magistracy supplied with men of virtue and probity, and the whole constitution so framed, that the people called quakers might have a share with other Christian people in the government, which thou always gave them an expectation of, and which they justly claim as a point of right, not for the sake of honour, but for the suppressing of vice, &c."

To wade through the whole of this provincial controversy which, at several reprisals, lasted till Gookin was superseded in the year 1717, and replaced by William Keith, Esq. (afterward sir William Keith, Bart.) would be a task of great prolixity, and what consequently might prove as tedious to the reader as laborious to the writer.

Enough has been recited, to show upon what terms Mr. Penn was first followed by his flock, as a kind of patriarch, to Pennsylvania; as also, what failures in his conduct towards them were complained of by them; and as to the conduct of the several assemblies, which, in the several periods of this in-

* The governor had rejected the *bill* proposed by the assembly for establishing courts of justice, &c. and had done it by an *ordinance* of his own.

terval, maintained this controversy, a bare perusal of their proceedings is in general sufficient for their justification.

Men they were; passions and interests they consequently had; and, if they were sometimes carried away a little too far by them, it is obvious the passions and interests of others worked up the ferment first, and never relented to the last.

It is true, an over rigid performance of conditions is not to be expected of government, and seldom can be exacted from it: but then if the representative part is not tenacious, almost to a fault, of the rights and claims of the people, they will in a course of time lose their very pretensions to them.

Against Logan, the proprietary's minister, stands upon record, still unanswered, thirteen articles of malversation, by way of impeachment, which the governor (Evans) found means to evade, against the repeated offers of the assembly to produce their witnesses and fasten their proofs upon him: and against the governor himself, twelve in the shape of remonstrances, which argue him loose in principle, arbitrary in disposition, and scandalous in his private life and deportment.

So unpopular was he, that an unanimous vote of thanks to the proprietary was passed on his being removed, almost before his face, for he was still a resident among them: and as he had been Logan's screen, so his successor, Gookin, was little better than Logan's tool. The first had the name; the latter the power; and by the help of the council, spurred him on, or reined him in, as he pleased.

Both were necessitous, consequently craving alike; and having each considered himself first, and the proprietary next, had little consideration left for the crown, and none at all for the people.

If Evans adventured to act in many respects as if there was neither charter nor assembly, or, rather, as if he was authorized by his commission to do what he pleased in contempt of both, (as appears by his arbitrary dismission of one assembly, merely because they could not be brought to obey his dictature) Gookin after his example, and at the instance of Logan, declared another assembly to be no assembly, and refused to hold any further correspondence with them: and yet when he was on the point of being recalled, he was both mean enough and desperate enough to convene the assembly, purposely to make them this laconic proposition, viz. "That, for the little time he had *to* stay, he was ready to do the country all the service he could:—and that they might be their *own carvers*, in case they would in some measure provide for his going back to seek another employment." Of which, however, they made no other use than to gratify him with a present of two hundred pounds.

Lastly, that the reader may have a general idea of those assemblies, represented in proprietary language as so refractory and turbulent, so pragmatical and assuming, let him accept of a passage out of one of their own papers to governor Evans, in which they thus characterize themselves. "And though we are mean men, and represent a poor colony, yet as we are the immediate grantees of one branch of the legislative authority of this province, (*which we would leave to our posterity as free as it was granted*) we ought to have been, and do expect to be more civilly treated by him that claims the other branch of the same authority, and under the same royal grant, and has his *support* from us and the people we represent."

It is by this time apparent enough, that though the *proprietary* and popular interests spring from one and the same source, they divide as they descend: that every proprietary governor, for this reason, has two masters; one who gives him his commission, and one who gives him his pay: that he is on his good behaviour to both: that if he does not fulfil with rigor every proprietary command, however injurious to the province or offensive to the assembly, he is recalled: that if he does not gratify the assembly in what they think they have a right to claim, he is certain to live in perpetual broils, though uncertain whether he shall be enabled to live at all: and that, upon the whole, to be a governor upon such terms, is to be the most wretched thing alive.

Sir William Keith could not be ignorant of this; and therefore, however he was instructed here at home, either by his principal or the lords of trade, resolved to govern himself when he came upon the spot, by the governing interest there: so that his administration was wholly different from that of his two predecessors.

With as particular an eye to his own particular emolument, he did indeed make his first address to the assembly: but then all he said was in popular language: he did not so much as name the *proprietary:* and his hints were such as could not be misunderstood, that in case they would pay him well, he would serve them well.

The assembly, on the other hand, had sense enough to discern, that this was all which could be required of a man who had a family to maintain with some degree of splendour, and who was no richer than plantation governors usually are: in short, they believed in him, were liberal to him, and the returns he annually made them were suitable to the confidence they placed in him: so that the proper operation of one master-spring kept the whole machine of government, for a considerable period of time, in a more consistent motion than it had ever known before.

Of all political cements reciprocal interest is the strongest; and the subject's money is never so well disposed of, as in the maintenance of order and tranquillity, and the purchase of good laws; for which felicities Keith's administration was deservedly memorable.

Under proprietary displeasure, however, by the resentment and artifice of Logan, the proprietary secretary, excited and aggravated by some neglects and mistakes of his own, he sunk at last; after what manner, it may not be altogether unuseful to intimate.

When Mr. Penn died in the year 1718, he left his hold of the province (which was much incumbered, by a mortgage on one hand, and by a transfer of it to the crown for ten thousand pounds, of which he had received two thousand pounds, on the other) in the hands of trustees, namely, his widow, Henry Gouldney, Joshua Gee, and his all-sufficient secretary Logan.

The difficulties thus resting in his family were very well known in the province; notwithstanding which, the inhabitants, satisfied with their governor, persevered in all duties to them; nor seemed to entertain a thought to their disadvantage.

Logan and his creatures were the only malcontents; and why they were so will be made sufficiently obvious. The governor and assembly in concurrence, could govern the province without his participation; so he remained without importance to either, till this share of the trust enabled him to interpose, and entitled him to be heard, at the expense of both.

In the second year after Keith's arrival, Logan had divided his council against him, and carried off a majority; and ever after had represented him in his despatches, as having substituted his own interest in the place of the proprietary's, and confederated with the assembly to make both branches of the legislature equally subservient to popular purposes.

Subtle, however, as he was, and practised in all the arts of political disguise, he could not long conceal himself from the penetration of Keith. Thus having been detected (as Keith says*) in aggravating, and even in altering certain minutes of the council-proceedings for the purposes before specified: and, in full confidence of proprietary protection, defending himself therein, with much personal abuse against the governor; the latter dismissed him from his post as secretary, and substituted another in his place.

With this, and a variety of other complaints all of the same tendency, Logan therefore made a voyage to England, soon after he became a trustee, and there made his court so effectually to the widow, &c. that they freighted him back with letters of reproof, and *private* instructions to Keith, not only to reinstate him, but in effect, to be governed by him, as implicitly as Gookin had been governed before.

Keith, on the other hand, being a man of too much spirit to submit to such treatment, and presuming beside, that his services to and interest in the colony, and his connexions with the most considerable men in it, would uphold him against all opposition whatsoever, communicated all to the assembly, together with his own answers: and this he thought was the more incumbent on him, because Logan had already been making his efforts to stir up a party against him.

Logan, upon this, commences advocate in form for the proprietary interest; presents a written plea on its behalf to the assembly, justifying therein all the restrictions laid on the governor by those instructions, (which will be in the next session explained) and whether by chance or design, it is hard to pronounce, suffered the secret of the quarrel to escape, by insinuating, that the *proprietary*, during his absence, had not received *one penny* either to himself or his family from the *government*, whereas others had received *large sums*.

The assembly, however, not being in a humour to pay two government subsidies instead of one, when exempted by the original article of *quit-rents* from the obligation of paying *any*, did not so much as take notice of this point; but on the contrary, closing with the governor, desired his concurrence with them, and offered their concurrence to him, in withstanding whatever was in the said instructions contained, repugnant to their charter, or inconsistent with their privileges.

The governor himself also became an advocate for the province, and laid before the assembly a written defence of the constitution thereof, as well as of the late *proprietary's* character, in answer to Logan's memorial; and the session was concluded most triumphantly on the governor's side: for the house not only agreed to a remonstrance, in answer to the widow Penn's *private* instructions, as they were called; but moreover gratified him for his extraordinary services with a thousand pounds.

The controversy continued notwithstanding; and both parties bestirred themselves equally in order to make proselytes. Logan seemed more humble than before, but never was more confident. Keith never was so much in pain for his own stability, and yet never seemed to have less apprehensions. In proportion, however, as it became more and more probable, that he would be laid aside, he became less and less considered; and a breach between him and the speaker Lloyd, so often mentioned, and who had, even in

* Governor Keith's letter to the widow Penn, September 24, 1724.

orint, acted the part of a second to him, became as fatal to him as it was fortunate to Logan.

When the next assembly met, it soon appeared, that though the governor used the same patriot-language to it, he had not the same ascendancy over it. Two several negatives were put, upon two several motions to furnish him, the first with six hundred pounds, the second with five hundred pounds, towards his support. No more than four hundred pounds could be obtained: and, notwithstanding all engines and all devices were employed, no farther compensation could be procured for him.

It is equally the lot of this nation to be more specious than virtuous, more splendid than consistent, and to abound more in politicians than philosophers. Keith had more of the former than the latter in his composition, though he was neither in any eminent degree. A politician would not have furnished his adversaries with a plea to excuse his removal, by communicating a private paper to a popular assembly. A philosopher, governed by principle, and proof against passion, would not have been in the power of any issue whatsoever: and if the assembly had been capable of consistency, they would have set a lustre on his dismission, by accompanying it with all the *douceurs* in the power of the province to have heaped upon him, that other governors might have thought it worth their while to proceed on his plan.

Instead of which, on the first intelligence of a new governor, which was as carefully imparted to *them*, as concealed from *him*, they even affected to procrastinate the business of the province; and when upbraided by Keith with this backwardness, and, not without some mixture of indignation, required to give the public a testimonial of his administration, they proceeded in it, as if rather constrained than inclined; and at last took care to say as little as possible, though they had room to say so much.

In short, after a nine years' administration, unembarrassed with any one breach between the governor and assembly; and, as acknowledged by the latter, productive of much positive good to the province, they parted with reciprocal coldness, if not disgust: Keith disdaining to follow Gookin's example in desiring a benevolence; and they not having consideration enough left for him to offer it.

There is no man, long or much conversant in this overgrown city, who hath not often found himself in company with the shades of departed governors, doomed to wander out the residue of their lives, full of the agonizing remembrance of their passed eminence, and the severe sensation of present neglect.

Sir William Keith, upon his* return, was added to this unfortunate list; concerning whom the least that can be said, is, that either none but men of fortune shall be appointed to serve in such dignified offices: or otherwise, that, for the honour of government itself, such as are recalled without any notorious imputation on their conduct, should be preserved from that wretchedness and contempt which they have been but too frequently permitted to fall into, for want even of a proper subsistence.

The reader is desired to pardon this digression, if it is one. It was necessary to show, that the province of Pennsylvania, when well governed, is easily governed; and that whichever branch of the legislature inflames the proprietary jealousy, or interferes with the proprietary interest, the result is the same: the obnoxious assembly is reprimanded and vilified, and as before observed, the obnoxious governor is recalled.

So that, unless the province stoops to be loaded with a triple tier of subsidies; namely, one for the public service, ordinary and extraordinary, one for the governor's annual appointments, and one for the gratification of the proprietaries and their creatures, it seems reasonable to conclude it is never to enjoy any established state of tranquillity.

And now, in addition to the points of proprietary encroachment and proprietary resentment already mentioned, we are naturally led to such other points of controversy, as at various times have arisen for want of sufficient foresight and sufficient preventatives; and of which several are unhappily in agitation at this very day.

It cannot but be recollected, that Mr. Penn, in his discourse with his joint adventurers, concerning reserved rents for the support of government, made a remarkable distinction between his two capacities of *proprietary* and *governor*: and from hence, as well as from the nature of the trust, it must obviously follow, that when he withdrew himself to England, and transferred the government to his deputies, those deputies could not but be possessed of all the powers originally vested, by the crown, in him. Adroit as he was at refinements, he could not do by his trust as he did by his land;—withhold a reserve of power, and, like the drunken sailors in the play, appoint a viceroy, and retain a power to be viceroy over him.

And yet even Mr. Penn himself in his commission to Evans, a man, as we have seen, determined enough to push any proprietary, and defeat any popular point whatsoever, could venture to slip the following clause into his commission, to wit: "saving always to

* He staid in Philadelphia some time after his being displaced; and, seduced by his resentments, condescended to act a part neither becoming nor prudent: procuring himself to be returned as an assembly-man, and taking all the measures in his power to divide the province, embarrass the governor, and distress the *proprietaries*.

me and my heirs, our *final assent* to all such bills as thou shalt pass into laws in the said government, &c."

The assembly, however, to whom this commission was communicated, were shrewd enough to start the following doubt upon it, and to send it by way of message to the council, to wit: "whether the said vote is void in itself, and does not vacate the rest of the said commission or render it invalid?" And the council, with the proprietary's eldest son at the head, and secretary Logan at the rear of it, were so startled at it, that, in order to evade the last inference, they found themselves under a necessity to return the following answer.

"We of the council, whose names are hereunto subscribed, are of opinion, that the said *saving* is *void in itself:* and that those bills which the present lieutenant-governor shall think fit to pass into laws, and cause the proprietary's great seal to be affixed thereunto, cannot afterwards be vacated or annulled by the proprietary, without assent of the assembly of this province."

The next piece of practice, to answer the same purpose, that was found out, was to impose certain conditions of government on the deputy, under the penalty of a certain sum. This was first submitted to by Keith, and has been a rule to all his successors, with this difference, that whereas the penalty exacted from him was but one thousand pounds sterling, it has been since raised to two or three thousand pounds.

If ever the case of this colony should come before parliament, which is not altogether improbable, no doubt these conditions will be called for; and if they should then be found irreconcilable with the charter, and a check upon the legislative, altogether unconstitutional and illegal, the wisdom of the nation will, no doubt, pronounce upon such a trespass according to the heinousness of it.

Again: the widow Penn, in her private instructions to sir William Keith, having admitted and complained, that the powers of legislature were lodged in the governor and assembly, without *so much* as a *negative* reserved to the *proprietary* when absent, proceeds to avow, that it was never *intended* [by the proprietary must be understood] the said governor and assembly should have the exercise of these powers; as also to pronounce it a *dangerous invention of* Keith's to enact laws in conjunction with the assembly, and transmit them directly to the king's ministers without any *other* check; and then, after thus arrogantly interposing between the king and his lieges of this province, clenches the whole with the following injunction; "therefore, for remedy of this *grievance*, it is required, that thou advise with the council, upon every meeting or adjournment of the assembly, which requires any deliberation on the governor's part: that thou make no speech, nor send any written message to the assembly, but what shall be first approved in council; that thou receive all messages from them in council, if practicable at the time; and shall return no bills to the house, without the advice of the council; nor pass any whatsoever into a law, without the consent of a majority of that board, &c."

What, therefore, the governor's bond has not been sufficient to obtain, this new expedient was to extort. If the governor would not act as required, he was thus to be disabled from acting at all: and after so many various frames of government had been granted and regranted, proprietary *will* and *pleasure* was to be the last resort of all.

In vain both governor and assembly freely and fully remonstrated against such an innovation, in a government supposed to be guarded by charter against all innovations whatsoever; more especially such as were neither consistent with the rights of the people, the powers already vested in the governor, nor the respect due to the crown.

Logan discovered the assembly were not authorized by *charter* to *advise*, though they were to enact; because the word *advice* was not to be found in that *last* given to them; that governors were not to be trusted to act without advice; consequently the said expedient to bridle them was a good one; and if we may judge by events, his sophistry has given the law ever since.

From what has been thus far recited, it is obvious, that the proprietary of Pennsylvania was of too little consideration here at home, to be of much use to the province either as a protector or advocate; and yet, that he was *there* so much above the level of his freemen and tenants, that, even in their legislative capacity confederated with the governor, they could hardly maintain their rights they were so many ways entitled to, against the artifices and encroachments of his emissaries.

As *lord* of the *soil*, is the light he is next to be considered. The charter Mr. Penn obtained of the crown, comprehended a far greater extent of territory, than he thought fit to take up of the Indians at his first purchase.

And even in the very infancy of his colony, it was by act of assembly inconsiderately, because unconditionally, provided, that in case any person should presume to buy land of the natives, within the limits of the province, &c. without leave first obtained from the proprietary, the bargain and purchase so made should be void.

Rendered thus the only purchaser, he reckoned he might always accommodate himself at the Indian market, on the same terms, with what quantity of land he pleased; and till the stock in hand, or such parts of it as he

thought fit to dispose of, were in a fair way of being sold off, he did not think it for his interest to incumber himself with more.

This happened sooner than he foresaw; though it must be acknowledged the founders of few cities appear to have had more foresight than he. The growth of his colony exceeded his most sanguine expectations; and, when successive new purchases came to be made, an inconvenience by degrees became manifest, which, perhaps, had not been thought of before, or if thought of, had not been guarded against.

Men who want a present convenience must not be over solicitous about future contingencies; and, in general, we choose to be blind to such objects as we fear we have not strength enough to remove: he that is too much of a huckster often loses a bargain; as he that is too little so, often purchases a lawsuit.

It was no hard matter to induce a belief, that occasional treaties with the Indians, under the pretence of keeping up the same brotherly correspondence which had been at first established with them, was a necessary measure of government; nor to prevail with the province, while this was understood to be the sole consideration, to bear the expense of them.

But when it appeared, as in the course of time was unavoidable, that a treaty and a purchase went on together; that the former was a shoeing-horn for the latter; that the governor only made the compliments, and the assembly the presents, &c. it could not but appear also, that there must be somewhat unfair in a procedure where one paid all the cost, and the other engrossed all the profit; and that it was high time to put some stop to a practice so injurious to their understandings.

It is not indeed necessary in private life to bargain, that those who purchase for their own use and advantage, should pay the price out of their own pockets; but in public it is.

Persons who stand on the same ground will insist on the same rights; and it is matter of wonder, when any one party discovers folly or insolence enough to demand or expect any pre-eminence over the other.

Whereas prerogative admits of no equality; and presupposes, that difference of place alters the use of language, and even the very nature of things.

Hence, though protection is the reason, and, consequently, should be the end of government, we ought to be as much upon our guard against our protectors as against our enemies.

Power, like water, is ever working its own way; and wherever it can find or make an opening, is altogether as prone to overflow whatever is subject to it.

And though matter of right overlooked, may be reclaimed and re-assumed at any time, it cannot be too soon reclaimed and re-assumed.

That assembly then, which first discovered this lapse, or which at the requisition of their constituents, first endeavoured to retrieve it, did no more than their duty; and the precedent they set cannot be too closely followed.

Again: the distinction made by Mr. Penn in the case of the quit-rents, between his two capacities of *governor* and *proprietary*, had an use, which even he, with all his shrewdness, did not perhaps advert to, when it was made; or at least expect it would be adverted to by any body else.

For the support of the governor and government, it must be recollected they were submitted to; for the support of the proprietary, when absent from his government, and when the government charge was otherwise supported, they were paid: and as he and his agents went on, not only to reserve such rents out of all the parcels of lands they disposed of, but even to rise in their demands, as the value of lands rose; so it could not but follow, that in process of time these quit-rents would of themselves become an immense estate.

When, therefore, the proprietary no longer acted as governor, nor even resided in the province, nor expended a fifth of his income there, could it be supposed, that this estate, thus obtained and thus perverted from its original purpose, should not be liable, in common with all other estates, to contribute to those charges it was first in the entire allotted for, and the whole amount of which it so many fold exceeds?

No property in England is tax-free: no difference in the amount, or value of property, makes any difference in the duty of subjects: and nothing is more consonant to reason, than that he who possesses most, should contribute most to the public service.

And yet, for want of a specific clause to declare their property taxable, the present proprietaries insist on having it exempted from every public obligation, and upon charging the difference on the public, who, it cannot be too often remembered, gave it in the first instance as the price of an *exemption* from all other taxes.

Clear, however, it will be made to every unprejudiced mind, that such a specific clause neither is nor ever was necessary; and, that in virtue of the inherent right, as well as the power and authority reposed in the freemen to tax themselves by ways and means of their own providing, all the property of the province lies indiscriminately at their discretion, subject to an equal taxation.

The *paper currency* of the province is next to be mentioned; and as that was out of pros-

pect while the several *frames* of government were under consideration, it could not be comprehended in any of them.

The currency then was, and so continued to be, for many years after, gold and silver of any species by weight; at first in so irregular a manner, and at such uncertain rates, as gave the crafty many opportunities to prey upon the ignorant and necessitous; consequently was productive of much contention, embarrassment, and confusion.

By royal proclamation, in the fourth of queen Anne, the rates and values of all foreign coins current in the English colonies were limited and ascertained; and, in her sixth, the contents of the said proclamation were enacted into a law, which is still in force.

But the annual influx of these foreign coins, through what channel soever, or from whatsoever source, by no means answered the demands of an annual issue.

From England came all the manufactures consumed in the plantations; and all the returns they could make by their commodities sent thither directly, or the product of them at other markets, fell far short of the balance growing against them.

The defect, therefore, was to be made good in gold and silver, and was so as long and as often as any could be found. Every colony, in its turn, was, consequently, drained of its specie; and, as it is an impossibility known and avowed, for any trading community to subsist without some medium of circulation, every colony in its turn was obliged to have recourse to the same expedient of uttering provincial bills of credit, and making them answer, as far as possible, all the topical purposes of gold and silver; by which their several capitals were enlarged; the gold and silver became commodities that could be spared for exportation; and the merchants at home were paid in that gold and silver, without any provincial detriment.

Pennsylvania, however, if not the very last, was one of the last, which gave into it. It was not till the year 1722 (Keith, governor) that they made their first experiment; and even then they proceeded with the utmost caution and circumspection, in every step they took.

Knowing, for example, that the danger of depreciation was the only danger they had to guard against, and that nothing but an over quantity, defect of solid security, and of proper provision to recall and cancel them, could create that danger, they issued at first but fifteen thousand pounds; they made no loans but on land-security or plate deposited in the loan-office: they obliged the borrowers to pay five *per cent.* for the sums they took up; they made their bills a tender in all payments of all kinds, on pain of vacating the debt, or forfeiting the commodity: to keep them as near as possible on a par with gold and silver, they imposed sufficient penalties on all those who presumed to make any bargain or sale upon cheaper terms, in case of being paid in the one preferable to the other: they provided for the gradual reduction of them, by enacting, that one eighth of the principal, as well as the whole interest money, should be annually paid. And it was not till they were convinced by experience of the utility of the measure, and the insufficiency of the sum, that they adventured to issue thirty thousand pounds more.

Such, moreover, was the benefit apparently resulting from it; such the inconveniency apprehended by every body from the scarcity of money sure to follow a too precipitate discharge of the loans; and such the apparent growth of the province during this interval, that, in the year 1729 (Patrick Gordon, governor) it was thought advisable to increase the provincial capital by a new emission of bills, to the amount of thirty thousand pounds, and to render the repayments still easier to the borrowers, by reducing them to one sixteenth a year.

Again: in the year 1739 (George Thomas, governor) occasion was taken from the discoveries repeatedly made, that these provincial-bills had been counterfeited, not only to call them all in, in order to their being replaced with others of a new impression, &c. but also for the reasons before given, to issue the further sums of eleven thousand one hundred and ten pounds five shillings, (which, added to the sums already in circulation, made their whole capital amount to eighty thousand pounds) to be current for sixteen years.

Lastly: finding, that the like, or a greater sum, in case the province should grow still greater, would in all probability be always necessary, the assembly moreover provided, that so fast as any of the former borrowers should repay their provincial-money, the trustees of the loan-office might re-emit the same sums during the said term of sixteen years, on the same conditions, either to them or others, without any new authority for that purpose.

And, upon the whole, it is to be observed, that the assembly, in establishing this paper currency, in taking upon themselves, as representatives of the province, to appoint the trustees and other officers charged with the administration of it; in providing that the said trustees and officers should be responsible to the province for their conduct in it; and in reserving to the assembly, for the time being, the disposition and application of the annual product, met not with any such objection from their governors, or the proprietaries, or the ministry here at home, as could excite the least apprehension of any such contest, as might either embroil the province, affect the interest, or incommode the government of it.

It is true, the proprietaries and their agents did, from the beginning, discover a repugnance to this measure, till they found themselves considered in it; like the snail with his horns, they had no sensations for the province, but what reached them through the nerves of power and profit. Profit, though ranked last, they consulted first; and when possessed of one point, they thought they might wrangle more successfully for the other.

If the widow Penn acquiesced in the paper-money acts passed by Keith, she reprimanded him for passing them; and in a manner forbid him to pass any more.

Gordon (Keith's successor) having over and over again acknowledged his *conviction* of the *conveniences* arising to the province from a reasonable increase of their paper currency, gave the assembly to understand, in so many words, that nothing but the gratification of the proprietaries in the affair of their *quit-rents*, would prevent the opposition they were otherwise to expect to the act then before them in England.

By special contract with the several purchasers, these quit-rents of theirs were to be paid in *sterling money;* and, as it was impossible, by any provision whatsoever, to make the provincial currency answer the universal purposes of gold and silver, so no provision could hinder these metals from having the preference of paper. To convert paper into specie or bullion could not of course but be attended with some cost; and hence the proprietary-remittances could not but come shorter home. When, therefore, by the eighty thousand pounds act, paper was to become the provincial establishment, they would not allow their share of the provincial advantage resulting from it (which was, at least, equal to that of the province, as will hereafter become apparent) to be what it really was, an adequate consideration, but insisted, not only on having the difference between paper and specie or bullion made up to them, and that the difference of exchange should be made up to them also; or, in other words, that the pounds sterling due to them in Pennsylvania, should be paid to them *nett* in England.

In short, the sum of one thousand two hundred pounds was in this manner extorted from the province, together with an annuity of one hundred and thirty pounds, to continue during the circulation of those bills; which will serve to show, at least, that the province could not be more stubborn, upon other occasions, than the proprietaries were selfish on this.

There remains yet another topic to be touched upon, which will require a more tender consideration from the reader than perhaps it may always find.

Mr. Penn and his followers were of that sect, who call themselves by the amiable and levelling name of *Friends;* and who having been at first opprobriously called by that of *quakers*, have been forced, by the joint tyranny of imposition and custom, to answer to it ever since.

Of these, the majority carried along with them a scruple better accommodated to the forming of a society and preserving it in peace, than to the protecting it from those insults and depredations which pride and lust of dominion have at all periods committed on their weaker neighbours; and from the visitation of which, no system of politics, morals, or religion, hath as yet been able to preserve mankind.

All their views, purposes, and endeavours were narrowed, therefore, to the forms and uses of civil life; and to link the several parts of their own little community in the most expedient manner together.

Nor, indeed, had they at that time any other object before them: alike to wage war against any power in alliance with England, and to correspond with any power at war with her, was expressly forbid both to the *proprietary* and the *province*, by the fifteenth section of the royal charter.

The French were too feeble in America and too remote from Pennsylvania, to be then apprehended. The provinces adjacent were branches from the same root, and responsible for their conduct to the same laws; and the Indians, from the very beginning, had been considered and treated as equally the sons of one common father.

Land wanted by us was a drug to them. The province, then to be allotted, peopled, and cultivated, had not been wrested from them by violence, but purchased for a suitable consideration. In the contract between the proprietary and his sub-adventurers, all possible care had been taken that no cause of complaint should be administered to them: in trade they were not to be overreached nor imposed upon: in their persons they were not to be insulted or abused; and, in case of any complaint on either side, the subject-matter was to be heard by the magistrates in concert with the Indian chief, and decided by a mixed jury of Indians and planters.

The same regard to conscience which led them into this wilderness, adhered to them afterwards; and having thus resolved and provided, never to be aggressors, and not being sovereigns, they left the rest to Providence.

Governed by principle in all things, and believing the use of arms to be unlawful, the case of defence by arms could not come within their plan.

But then as their community was left open to Christians of all persuasions, and the conditions of union could be abhorrent to none, they might well presume on being joined by numbers, which has since happened accordingly, who, being devoid of such scruples,

might be easily induced, for proper considerations, to take that difficulty out of their hands: and, as to military service, under all English tenures whatsoever, no man could be compelled to serve in person, who made it his choice to serve by proxy.

Add to all this; that William Penn himself does not appear to have been under the dominion of these scruples; he having taken care in his charter from the crown (sect. 10.) to be invested with all the powers ever bestowed on a captain-general (which were also to descend to his heirs and assigns) "to levy, muster, and train all sorts of men, of what condition soever, or wheresoever born, and to make war and to pursue such enemies as should make incursions into the province, as well by sea as land, even without the limits of the said province, and, by God's assistance, to vanquish and take them," &c.

And, lastly, if ever involved in the quarrels of the mother-country, and obliged to take their share of the common duty and the common danger, they might reasonably hope for all the protection from thence they might stand in need of, on the condition of contributing all that was in their power, consistent with their principles, towards it.

This they have occasionally done from colonel Fletcher's time downwards, and they would have done more, if the proprietary calls and those of their deputies had not put it out of their power.

Allowing, therefore, that this unresisting principle would have been a solecism in the construction of an independent state, it was not, provincially speaking, destitute of proper palliatives.

At least, scruple of conscience is at all times, and in all cases, less blameable than the wanton experiments tried upon the province, even by the proprietary's own agents: first to scatter terrors among the peaceable inhabitants, and then to plead the necessity of a military force from the effects of their own wicked devices.

Of this nature was the false alarm raised in the queen's time by Evans and Logan: a fact which stands charged against them, in the records of the assembly, at this very day; and which, as often as recollected, will ever suggest a fear, that a measure, so unwarrantably contended for, would, if obtained, be as unwarrantably made use of.

We have now such a summary of the state of Pennsylvania, from its origin, before us, as may render every branch of the controversy still depending, familiar to us: and, as facts are best seen and understood in order of time as they occurred, we shall do our best to follow the thread as it lies.

In April, 1740, when the paper currency of the province had been just increased, as above specified, to eighty thousand pounds, and established for sixteen years, the merchants trading to the eastern colonies of America, took occasion to complain to the house of commons, of the inconveniences and discouragements brought on the commerce of Great Britain in those parts, by the excessive quantities of paper money there issued, and the depreciated condition thereof, for want of proper funds to support its credit. The house, by way of palliative, addressed the throne to put a temporary stop to the evil, by instructing the several governors, not to give their assent to any farther laws of that nature, without an express proviso, that they should not take effect till his majesty's approbation had been first obtained.

Such instructions were accordingly sent; and those to the governor of Pennsylvania were dated August 21, 1740. Notwithstanding all which, the lords of trade and plantations (having already in their hands a full and clear account of the currency, as established by the eighty thousand pounds act, as also of the rates of gold and silver, from the year 1700 to the year 1739; and having been moreover convinced, by the merchants trading to that province, that such a sum was not only reasonable but necessary for carrying on the commerce of the country) thought fit to recommend the said act, to the royal acceptance and ratification; and ten days afterwards the lords justices passed it into a law.

Here the affair slept for several years, except that the assembly, in conformity to an order, which accompanied the instructions just mentioned, caused a second state of their currency to be transmitted the following year to the lords of trade: and before it was again resumed in parliament, the several incidents, next to be recited, took place.

When the attempt upon Carthagena was under consideration, the *northern* colonies were called upon to furnish soldiers for that service, and Pennsylvania among the rest. The assembly was at that time composed, as it had hitherto generally been; consequently this demand could not but be productive of scruples and difficulties in point of conscience; that, however, they might discharge all obligations at once, they voted four thousand pounds for the king's use, and the governor took upon himself to raise the soldiers.

This was a duty of office; and, if he had discharged it properly, what would have given universal satisfaction. The labour of the plantations is performed chiefly by indented servants, brought from Great Britain, Ireland, and Germany; nor, because of the high price it bears, can it be performed any other way. These servants are purchased of the captains who bring them; the purchaser, by a positive law, has a legal property in them during the term they are bound for; can sell or bequeath them; and, like other chattels, they are lia-

ble to be seized for debts. Out of these, nevertheless, did the governor make his levies. A ferment ensued: the owners were tenacious of their rights: the governor stood upon prerogative as paramount to all: the dispute was brought into the courts; and such was the terror of power, that the aggrieved was forced to repair to New York for advocates.

The assembly, seeing no other remedy, thought themselves bound to defend the rights of their constituents; and did defend them accordingly, by refusing to part with their supply, unless these servants so unjustly taken from their masters were restored. The governor was obstinate, and so the money was, at last, applied, as it ought, to indemnify them for the injury they had sustained.

That, however, they might not be misrepresented or misunderstood at home, as deficient in zeal for the public, or backward to contribute to the service, they came the next year to the following vote, to wit: 'The house, taking into consideration the many taxes their fellow-subjects in Great Britain are obliged to pay towards supporting the dignity of the crown, and defraying the necessary and contingent charges of government, and willing to demonstrate the fidelity, loyalty, and affection of the inhabitants of this province to our gracious sovereign, by bearing a share of the burden of our fellow-subjects, proportionably to our circumstances, do therefore, cheerfully and unanimously resolve, that three thousand pounds be paid for the use of the king, his heirs and successors, to be applied to such uses as he in his royal wisdom shall think fit to direct and appoint." And the said three thousand pounds were afterwards paid into his majesty's exchequer by the agent of the province accordingly. A free gift, if ever there was one, from subject to sovereign; and, however small, a sufficient voucher for the good intentions of those who made it.

In the beginning of the year 1745, the project against Louisburgh, having been carried in the assembly of New England by a single vote only, was imparted to the assembly of Pennsylvania by governor Shirley, with a desire, that they would contribute thereto: but though they could not be prevailed upon to take any part in an enterprise which to them appeared so desperate, they voted four thousand pounds in provisions, for the refreshment and support of the brave troops who had taken the place, as soon as it was known they were in possession of it, and that such supplies were wanting.

In the beginning of the year 1746, the ministers affected to entertain a project for the reduction of Canada. By letters from the secretary's office, dated April 6, the *northern* colonies were severally called upon to contribute their respective quotas towards it; which they cheerfully concurred in doing, seduced by their interests and their inclinations into a belief, that the whole line of our colonies would not be thus agitated, nor their Indian allies induced to take up the hatchet in conjunction with them, merely by way of feint to facilitate a peace.

Forces were every where raised by the several governors, and the assembly of Pennsylvania voted five thousand pounds for the king's use, or, in other words, as their contingent for this pretended national service. The money so voted being more than their revenue could furnish, they proposed to raise it by an addition of the like sum to their paper currency; in which case the king would be served, the provincial capital would be so far enlarged, and the interest arising from it would, in a due proportion of time, discharge the principal.

And here began the first dispute between the governor and the assembly on this topic: the governor pleaded the instruction of 1740 as a reason, why he could not bring himself to such a *pitch of boldness* as he apprehended was necessary to the contravention of it; and therefore urged them to find out some method less exceptionable for raising the said sum: and they, willing to comply as far as possible with his scruples, so far receded from their point to that time as to issue it out of the money dormant in the loan-office for exchanging torn and illegible bills, and to replace it by a new emission of bills to the same amount, to be sunk out of the product of the excise in ten years. Upon which the governor waved the instruction, and passed the bill; five hundred men were raised and supported by it, for near eighteen months, employed chiefly in defending the frontiers of New York, when the expedition at length was dropped and the troops disbanded.

A formal bill to restrain the *northern* colonies in general, from issuing paper bills of credit, it must be observed had been brought into parliament, but not perfected; and in the year 1748 again: upon which occasion the next governor of Pennsylvania, James Hamilton, Esq.; in a message to the assembly in October 1749, made use of the following remarkable expressions: "I take it for granted, we are all sensible of the *mischievous tendency* of the bill that was brought into parliament the last year, to regulate and restrain paper bills of credit in the plantations (in which there was a clause to enforce the orders of the crown in his majesty's American dominions) and it is not improbable, that something of the same kind may be offered in the ensuing session. I persuade myself you will give your agent full instructions upon this subject, in case it should become necessary for him to oppose it: the honourable proprietaries at that time laboured and with success

to *avert* the *mischiefs* that *threatened* this province from the passing of the said bill; and I have it in command from them to assure you of their assistance upon all future occasions, wherein the welfare and happiness of the people of this province may be concerned."

This had a favourable appearance towards the province, and from hence it might well be supposed, that the issues from this source would never be productive of any deep or lasting strife.

But though the springs had not as yet broke out with any violence, they were working their way under ground. The growing charge of Indian affairs, which lay wholly on the province, and which, on the head of purchases, as before explained, was productive of great advantages to the proprietaries, began to be the subject of public complaint: and by these suggestions of the importance of the proprietaries at home, the people were to be taught the danger of disobliging them.

But if this was their view, it did not answer: the assembly had too much discernment to be diverted from the object before them by the interposition of another, how dextrously soever the trick was performed, and therefore proceeded, notwithstanding, to take this affair into consideration.

It is scarce necessary to intimate, that the governor, and the creatures of the government, did all they could, not only to discourage them in it, but also to convince them, in effect, that, according to the usual current of the world, all advantages are the prerogative of those above, and all burdens the inheritance of those below.—This may indeed be agreeable to the usual current of the world: but then as such doctrines are not over palatable anywhere, so in a free government like Pennsylvania, it was not to be thought they would be swallowed at all. They were neither to be convinced nor discouraged it seems: on the contrary, they persevered; they examined; they reported; they resolved; and at last applied to the proprietaries, to do what equity required, by taking a share of the charge upon themselves.

The proprietaries, on the other hand, announced in their reply, "that they did not conceive themselves to be under any such obligation, even though the people had been taxed for the charges of government: that as not one shilling had been levied on the people for that service, it was so much less reasonable in the people to ask any thing of them: that they had, notwithstanding, charged themselves with paying their interpreter even much more than could be due to him on their account, and were also then at the expense of maintaining his son with a tutor in the Indian country, to learn their language and customs for the service of the country; as well as of sundry other charges on Indian affairs; that they had been at considerable expense for the service of the province both in England and there: that they pay the Indians for the land they purchase: and that they are no more obliged to contribute to the public charges than any other chief governor of any other colony."

In answer to this, the assembly, May 1751, respectfully represented, "that the preserving a good understanding with the Indians was more for the interest of the proprietary estate than that of any other estate in the province, as it gave the proprietaries an opportunity of purchasing lands on the frontiers at a low price, and selling them at a high one, which would otherwise be impracticable: that, therefore, the obligations of justice and equity being stronger than those of law, they were certainly bound by them to contribute to the expense of those Indian treaties and presents by which the good understanding so beneficial to them was maintained; that though taxes in form, for the immediate support of the proprietaries' substitute, and for defraying the charges of these Indian treaties, had not of late years been imposed on the province, the charge of all (by the interest of the paper-money, which was a virtual tax, the excise, which was a real one producing about 3000*l.* per annum, and the tax arising from licenses of various kinds, amounting yearly to a sum not inconsiderable, and appropriated wholly to the governor's support,) was paid by the province: that the assembly had always paid the Indian interpreter for his public services to his full satisfaction: that they believed future assemblies would not fail to do whatever could be reasonably expected from them in regard to his son, when he should be qualified to succeed him; as also to discharge all just debts for expenses properly chargeable to the province, whether incurred there or in England, whenever the accounts should be exhibited: that by the act forbidding all but the proprietaries to purchase lands of the Indians, they had obtained a monopoly of the soil, consequently ought to bear the whole charge of every treaty for such purchases, as the profit was to be wholly theirs: that their paying for land (bought as was conceived much cheaper on account of the provincial presents accompanying those treaties) was not a satisfactory reason, why they should not bear a part of the charge of such other treaties as tended to the common welfare and peace of the province: and that upon the whole, as the interests of the proprietaries were so constantly intermixed, more or less, with those of the province, in all Indian treaties, and as it appeared the proprietaries thought they paid more than their share, while the people thought they paid abundantly too much, they apprehended the surest way to prevent dissatisfaction on all sides, would be to fix a certain

proportion of the charge of all future provincial treaties with the Indians, to be paid by the proprietaries and province respectively: which, not only as a proposal equitable in itself, but conducive also to preserve that union and harmony between the proprietaries and people, so evidently advantageous to both, they hoped, would, on further consideration, be agreed to."

How this was received we shall see in its place.

The assembly proceeded soon after, to take into consideration the growth of the province, and the state of their commerce; and finding both to be such as required an extension of their paper-currency, on the same grounds and for the same ends as at first gave rise to it, unanimously resolved to strike an additional sum of twenty thousand pounds, in order to replace defective bills, and increase the provincial capital, in proportion to the increase of inhabitants; as also to re-emit and continue the sums already in circulation.

A bill was accordingly prepared in January, 1753, and sent up to the governor (Hamilton) for his concurrence; but though that gentleman was a native of the province, with rather better qualifications for his post, and, as may be supposed, more affection for the people than is common with governors, he had his reasons for not seeing this provincial point in the same light that the province did, and therefore returned the bill in a day or two, with his negative upon it: qualified indeed with expressions of concern for his so differing in opinion with them, but founded in the dislike raised in Britain by the late too general and undistinguishing complaints against the plantation bills of credit, which rendered the time very unseasonable for any application to the crown concerning the extension or re-emission of theirs: and fortified by a caveat, which sounded so much the more plausible, as it seemed to be drawn from their own premises, namely, that the many advantages they derived from the use of paper-money ought to make them extremely careful, how they took any step which might possibly endanger it.

The assembly, on the other hand, gladly fastened on an acknowledgment so express in favour of the thing; and, from the same sense of it, declared themselves to be equally careful with the governor in the conduct and direction of it: but having so done, they went on to say, "that as they did not think the dislike raised in Britain of the plantation bills, was so general and undistinguishing, or still so warmly subsisted as the governor seemed to apprehend, so neither did they conceive the time to be unseasonable for an application to the crown about theirs: that they were equally concerned with the governor for their difference of opinion, and that they might not seem to act too precipitately in an affair of such importance, they chose to make a short adjournment before they took his objection into consideration."

Adjourn they did accordingly; and at their next meeting, which was towards the end of May the same year, found themselves earnestly pressed by a message from the governor, on one hand concerning Indian affairs, and on the other by petitions from a considerable number of inhabitants, for a further addition to their paper-money, supported by a variety of allegations of the most interesting and affecting nature.

The governor's message, whether premature or not will best appear from the sequel, prepared the house to expect, "that the country of Alleghany situate on the waters of the Ohio, partly within the limits of Pennsylvania, partly within those of Virginia, already was or soon would be invaded by an army of French and Indians from Canada: in which case the Indians inhabiting there, who were a mixture of the Six Nations, Shawnese, Delawares, and Twigtwees, lately recommended as allies to the province by the said Six Nations, would be obliged to leave the country, and his majesty's subjects trading with them would be cut off, &c. unless timely warned by the messengers sent to them by himself for that purpose: that Montour, an interpreter, had heard the French declaration delivered, and the reply of the Indians, which was firm and resolute, but not to be relied upon as they were in want of all things."—So far was matter of intelligence. The rest was a pathetic representation of dangers and mischiefs to be apprehended on their own frontiers, and exhortations to enable him to give the Indians assistance answerable to their exingencies.

And upon the heels of this message, the governor also communicated to them the answer of the proprietaries to the representation of the assembly above exhibited; and which if purposely calculated to divide the province and inflame the animosities already kindled, could not have been better framed or better timed for those fatal purposes.

Professions of attachment to the true and real interest of the province, of sparing no cost or pains whenever it should appear to them necessary to advance it, and acting such a part in considering the matter of the representation as all disinterested persons should think just, they set out with: and, having made this ground for themselves, they proceed to charge the assembly with being actuated by ill will to them on one hand, and a desire to ingratiate themselves with the weaker part of the electors on the other. In the next paragraph they say, after we had "ordered our governor to give you the answer which he did, to your former application, we

had no reason to expect a repetition of the application directly to ourselves, as you might well suppose we had considered the matter before we had returned our first answer, and the repeating the request could only produce the repeating the answer, the occasion for which does not appear to us. It is possible, that one purpose may be in order to show more publicly this difference in opinion between us and yourselves; and if that was ever intended, it will be convenient we should set this matter in a clear light (although it may make our answer longer than we could wish) that the true state of the matter may appear."

They then urge the authority of the board of trade, in justification of their former assertion, that they were no more obliged to contribute to the public charges, than the chief governor of any other colony: they will not allow that their honoured father had any assistance from the people in making his purchases, or that there is the least colour for pressing them so unseasonably to contribute to the public charge, seeing that the said charge did not much exceed one half of the revenue:—and they not only return to their first charge, that the assembly by so doing, could only mean to captivate the weakest of the people, and so by their assistance continue to hold their seats in the assembly, but farther, cite as so many proofs, the time of making their first representation, which was just before an election: their printing the report and most extraordinary resolutions on which the said representation was founded, which seemed to argue it was rather intended as an address to them the said populace, than to the proprietaries, and the solemn repetition of the same request as if it was a matter of great value and importance.

Take the next article in their own words. "Wherefore, on this occasion, it is necessary that we should inform the people, through yourselves their representatives, that, as by the constitution, our consent is necessary to their laws, at the same time that they have an undoubted right to such as are necessary for the defence and real service of the country; so, it will tend the better to facilitate the several matters which must be transacted with us, for their representatives to show a regard to us and our interest: for, considering the rank which the crown has been pleased to give us in Pennsylvania, we shall expect from the people's representatives on all occasions, a treatment suitable thereto; and that whilst we desire to govern the province according to law only, they should be as careful to support our interests, as we shall always be to support theirs."

Recurring again to the revenue, they affected to be truly concerned for being obliged to acquaint the public with a state of it, settle that state at six thousand pounds a year, arising from the excise and the provincial bills: again assert, that the annual expense of government for a series of years, including Indian charges, amounts to little more than half that sum: and that of all this revenue, about four hundred pounds a year only has, on an average, for twenty years past (and great part of that time during war) been expended in presents to the Indians and charges on that account, which they could not conceive to be a large sum, compared with that revenue, the manner of its being raised, and so important a service as that of keeping the united nations of Indians in the interest of Great Britain.

They then talk of the taxes paid by their family here at home, as an equivalent to the Indian article; and then proceed in the following remarkable terms. "And at the same time that we show you that we do pay all other taxes here, that on land only excepted, we must advise you to be very careful not to put people here in mind of that signal exemption. Several proposals have been made for laying taxes on North America, and it is most easy to foresee, that the self-same act of parliament that shall lay them on our, will also lay them on your estates, and on those of your constituents."

In the next article, having denied that the assembly had always paid the interpreter to his satisfaction, and insisted that they themselves had gratified him when the assembly had refused to pay him what he thought his services deserved; they add, in a higher tone: "however, with respect to any expense of that sort, and many others here, we entered into them without any expectation of being repaid, and should think it far beneath us to send the accounts of them to the house of representatives, as your agents employed by yourselves might do, for the expenses incurred by them."

Proceeding in the same style, they say in the next article, "we do not conceive that any act of assembly does, or can establish what you call a monopoly in us for the purchase of lands: we derive no right or property from any such law: it is under the king's royal charter that we have the sole right to make such purchases," &c.

It is fit the last five articles should be inserted entire; and they are *verbatim* as follows, viz.

"12. Your assertion, that treaties for land are made at a less expense to us, on account of provincial presents being given at the same time, does not appear to us to be founded on fact: the last purchase was made on no other account, but purely to save the province the expense of making another present to some Indians, who come down after the time that the principle deputation had received the presents intended for the whole, and were on

their return back; and the land was bought very dear on that account, other treaties for land have been made when provincial presents have not been given; and we do not or ever did desire that the inhabitants should bear any part of the expense of Indians, who come down solely at our request to consent to the sale of lands, unless they stay on other public business also; and whenever they have come down on both accounts, we are sensible the expense has been divided in a manner very favourable to the public.

"13. We are far from desiring to avoid contributing to any public expense which it is reasonable we should bear a part of, although our estate is not, by law, liable to be taxed. As we have already been, so we doubt not we shall always be, at a far greater expense in attending the affairs of the province, than our estate could be taxed at, if all the estates in the province were rated to the public charges, which would be the only fair way of establishing a proportion. If we were willing to consent to any such matter, the value of our estate, and of the estates of all the inhabitants, ought to be considered, and the whole expense proportionably laid upon the whole value; in which case, you will find, that the expense which we voluntarily submit to, out of affection to the inhabitants, is much more than such our proportion so laid would amount to: besides these general expenses, the first of us sent cannon, at his own charge, to the amount of above four hundred pounds sterling, for the defence of our city of Philadelphia, neglected by a late house of representatives; which, alone, is such a sum as the proportion of a tax on our estate would not in many years amount to. And, as this is the case, we are not disposed to enter into any agreement with the house of representatives for payment of any particular proportion of Indian or other public expense, but shall leave it to them (to whom it of right belongs) to provide for such expense, as they shall judge necessary for the public service.

"14. As you desire to appear willing on your parts, to ease your constituents of a small part of the Indian's expense, by throwing it upon us, we shall, on our part, and hereby do recommend it to you to give them a real and far greater relief, by taking off a large share of that only tax which is borne by them. As the general expense amounts to little more than three thousand pounds a year, we conceive it may very well be provided for out of the interest of the paper-money, and one half of the present excise: especially if we shall be induced, from the state of your trade (which we expect soon to receive) to consent to an increase of your paper-currency; this would ease the inhabitants of about fifteen hundred pounds a year, which would be felt by many of them, when they would not be sensible of the trifle you propose we should contribute to the public expense. We have directed the governor to consent to such a law when you shall think fit to present it to him.

"15. As we shall ever, in the first place, endeavour to promote the real interests of the good people of Pennsylvania, we make no doubt of preserving an union and harmony between us and them, unless men of warm or uneasy spirits should unhappily procure themselves to be elected for representatives, and should, for the supporting of their own private views, or interests, influence their brethren, otherwise honest and well-designing, to espouse their cause; in such case indeed, disputes may arise, wherein we shall engage with the utmost reluctance; but even then, as we shall make the general good the rule of our actions, we shall, on all such occasions, if ever they should happen, steadily, and without wavering, pursue measures the most likely to conduce to that good end.

"16. The representatives being annually chosen, we are aware that we are not writing now to the same persons who sent the representation to us; the persons most forward to push on a measure (which, from the answer, we directed our governor to give to the former application he was desired to make to us, must be supposed disagreeable) may not now be in the house, but may be succeeded by more prudent persons returned for their places, who would be careful not to press a matter too far, in which the rights of the people are not really concerned: however, the answer we give must be to the representation sent us. And we desire, in any matter of the like nature, that the house will be satisfied with such an answer, as the governor may have orders to give on our behalf.

"THOMAS PENN,
RICHARD PENN."

In the temper the assembly was in before the reading of this ungracious paper, it was but natural to expect, that they would have taken fire immediately, and proceeded at once to their own justification.

But, much to the honour of their prudence, they took a different method. They ordered it to lie on the table, together with their own votes, report, representation, &c. alluded to in it; and returning to the two points already before them, resolved to clear their way, by despatching them first.

These, it will be remembered, were the currency-bill, returned to the house by the governor before their adjournment, with a negative, and the governor's message with respect to the resolution of the Indians to withstand the French, in case they should be invaded by them on the Ohio.

They had also under consideration several new despatches from their agent here at home,

and also an account of the value of their imports from hence; which for the year 1749 was in all two hundred and thirty-eight thousand six hundred and thirty-seven pounds two shillings and ten pence. For the year 1750, two hundred and seventeen thousand seven hundred and thirteen pounds and ten pence. And for the year 1751, one hundred and ninety thousand nine hundred and seventeen pounds five shillings and one penny. Whence it was apparent, that for want of a sufficient currency, to invigorate the industry, and supply the wants of the province, the importations from hence were in a gradual course of declension. And after mature deliberation on the whole matter, they again sent up their bill to the governor with the following message, viz.

"*May it please the Governor,*

"The governor's apprehension, at our last sitting, that the dislike raised in Great Britain of the bills of credit in the plantations, by the late too general and undistinguishing complaints, so warmly subsisted, as to make any application to the crown about our currency at that time unseasonable, induced the house, notwithstanding their different sentiments, to make a short adjournment, to consider farther of the weight of that objection; and also of the sums by that bill proposed to be made, and continued current in this province. And now, when we reflect, that though the complaints against a paper-currency, arising from the excesses of some colonies therein, were indeed at first too general and undistinguishing, so as to occasion the bringing into parliament a bill for restraining the same in all the colonies; yet, as upon strict inquiry (a state of our currency then lying before them) the parliament thought fit to alter the bill, and lay the restraint only on those colonies where that currency had been abused, we cannot but look on this as distinguishing in our favour; especially as we are assured, that no complaints were ever made of our currency by the British merchants trading hither, who only could be affected by it; but that on the contrary they have, whenever called upon for their opinion, by the parliament or the lords of trade, appeared openly and warmly in its favour, and declared (as they did in 1739, when our act for eighty thousand pounds, the present sum, was under consideration) That it was not only a reasonable sum, but absolutely necessary for carrying on the commerce of the country; which appears by the report of the said lords, made on that occasion to the council. And as the exports from Britain to this province, of which we have authentic accounts, had then, in the three preceding years, amounted to no more than one hundred and seventy-nine thousand six hundred and fifty-four pounds nine shillings and two pence sterling; and now in the years 1749, 1750, and 1751, they amount to six hundred and forty-seven thousand three hundred and seventeen pounds eight shillings and nine pence sterling; and our numbers of people, and domestic trade, and the occasions for a medium of commerce, are equally increased, there cannot, we think, be any doubt, but the British merchants will now likewise be of opinion, that the small addition we at present propose is absolutely necessary, though they may not think it so suitable to our circumstances as a larger sum; one hundred thousand pounds of paper-currency bearing by no means the same proportion to our trade now, as eighty thousand pounds did then. And it is certain, that, as the money circulating among us diminishes, so must our trade and usefulness to Great Britain, and our consumption of its manufactures, diminish.

"Upon the whole, we entreat the governor to consider the distressing circumstances under which the trade, and in consequence the whole province, must languish, if, contrary to our expectations, the bill we now present him should not be enacted into a law. And we are well assured, that as the governor has been pleased to declare his sentiments of the many advantages we derive from the use of paper-money, his transmitting it home, in a true light, will make our application to the crown as effectual as it is seasonable."

The governor now demurred in his turn, and by his secretary gave the house to understand, that, as it was usual for the assembly to meet again in August to finish the business of the year, he chose for that and some other reasons, to keep the bill under consideration, till that time.

In this the house acquiesced: and having suspended all resolutions on the proprietaries' paper, and the draught prepared by a committee of their own in answer to it, till their next sitting, proceeded to the Indian affairs, and having come to proper resolutions thereon, transmitted them also, together with the following judicious message to the governor, to wit:

"*May it please the Governor,*

"We have, on all occasions, acknowledged our grateful sentiments of the governor's regard and justice towards the Indians, our allies; and we now again return our hearty thanks for his continued care, and for communicating the intelligence he has received concerning their present distresses. In pursuance of which, we have resumed the consideration of the letters laid before the house, with the message of the 16th of October last, together with the governor's late message and papers, sent down to us before and since the return of the expresses despatched to Ohio. We have also carefully examined the messenger himself, and such Indian traders, and others, who could give us any information of the numbers, and designs of the forces, raised by the

governor of Canada, and of the condition of the Twigtwees, as well as the other Indians, our allies, upon the waters of Ohio, and upon mature deliberation, have resolved to contribute generously to their assistance, by a present suitable to their want of the necessaries of life.

"Though the alliance between the crown of Great Britain and the Six Nations, and the protection and assistance they expect to receive in virtue of that alliance, is more immediately under the direction of the government of New York; and although Virginia, at this time, has entered largely into the trade, and will, no doubt, on the present occasion, assist them and their allies, yet we have always endeavoured, in proportion to our abilities, by presents, as well as by obliging our Indian traders to behave with justice towards them, to preserve their friendship; and on the present occasion, notwithstanding we have the misfortune to differ in sentiments with our proprietaries in the part they ought to bear in these expenses, we have rather considered the advantages both they and the province may receive by our liberality, which we have voted cheerfully, and recommended the distribution to the care of the governor, that the Six Nations at Onondago (upon any application to be made to him in their own behalf, or for their allies who reside to the westward, and are likely to be more immediately affected) may be satisfied, and the present intended them best answer their necessities, and our peaceable and friendly intentions."

The present was eight hundred pounds; two hundred pounds as a present of condolence to the Twigtwee nation, for the loss of fourteen of them, cut off in the preceding year, by the French and their Indians,* and the rest to be distributed by the governor among the other nations, at his own discretion.

Thus far all was calm and quiet; and at their next meeting, in the latter end of August, they received two other messages from the governor, relating to the money-bill and the Indian present: the latter importing, that he had not, as yet, received any application for any purpose whatever, from any of the Indians; nor even such well-grounded advices of their wants and distresses as to induce him to make any use of the credit reposed in him: that he had, however, despatched Weiser [the interpreter] for intelligence; and that, having received advices by all who came from the westward, that the French were on the march towards the Ohio, and had sent out their parties to scour the woods before them, he had not sent the present of condolence, for fear of its falling into the enemies' hands, &c.

And as to the former, it related to the currency-bill, returned at the same time with some few amendments, to which he, the governor, presumed the house could have no objection; and concluded with these remarkable expressions: "I cannot, however, but acquaint you, that in giving my assent to this bill, I have acted rather in compliance to your repeated application, than that, in my own judgment, I could think an addition to our currency at this time, absolutely necessary: I am in hopes, nevertheless, that as the sum to be emitted is not exorbitant, it may be attended with no bad consequences to the province."

Now the principal of these amendments was the following proviso, viz. "Provided always, and it is hereby farther enacted by the authority aforesaid, that this act or any thing therein contained, shall not take effect, or be deemed or construed or taken to have any force or effect, until the same shall have received the royal approbation of his majesty, his heirs, or successors." Which proved to be so far from being unobjectionable, that, upon the question, the house unanimously resolved, "Not to agree to this amendment, because they apprehended it to be destructive of the liberties derived to them by the royal and provincial charters, as well as injurious to the proprietaries' rights, and without any precedent in the laws of the province." And the governor, on the other hand, adhered, "Because the clause so proposed to be added was founded on the additional instruction from the lords justices, in pursuance of the commons' address above specified; which instruction had been known to the province ever since January, 1740; and consequently, they might see the reason of his adding it was such as he could not allow himself the liberty of receding from."

And here it is to be lamented, that, while this affair was first under the consideration of parliament, neither the proprietary nor the provincial agent thought fit to lay those clauses of their charter before the house, by which the said proprietary and the assembly are entrusted with the whole legislative power, subject to the royal revision and ratification, and may even put laws not inconsistent with their allegiance in force, for the term of five years, without it; since, in all probability, that measure would have produced some such a temperament as might have prevented the broil which ensued apparently for want of it.

The assembly took the governor's reply immediately into consideration, and prepared a suitable rejoinder; in which having interwoven the unanimous resolution just specified, they declared themselves assured, from the report of their committee, to whom they

* They suffered this loss in defence of some English traders then in one of their towns. The French came with a strong body, and demanded that the traders and their goods should be delivered up to them. The Indians determined to protect them, but were overpowered by numbers; some of the traders were killed, and the rest carried to Montreal, and afterwards sent prisoners to France. This was before the commencement of the present war, and one of the many hostilities of the like kind previous to our seizing their ships.

had referred both the clause and the examination of their laws, that there had not been one single instance of a law passed under such a restriction as that then contended for, from the first settlement of the province to that day. And here they might have safely stopt, if they had thought fit, seeing nothing could be added in their justification stronger than their charter-claims, and such a series of practice founded upon them: but, willing to be every way fortified, they entered farther into an inquiry, why so dangerous an experiment should be then pressed upon them without the least apparent necessity? and proceeded to show, that the instruction itself was a temporary one: that, though it was directed to a governor of that province among the rest, it neither did nor could suit their circumstances, either at that or any other time before or since: that this, having been manifested to and acknowledged by the lords of trade, the ends of it, as to them, had been fully answered: that the said lords, in their report to the house of commons, subsequent to that address to the throne concerning the paper currencies of America, having signified, that they would humbly propose that his majesty would be graciously pleased to repeat his orders to his governors of the plantations, not to give their assent, for the future, to any bill or bills for issuing or re-issuing paper-money, proceed to say, "We hope these propositions for reducing and discharging the paper-currency of the plantations, may have a good effect in those governments which are held by immediate commission under his majesty; but we are very doubtful, whether they will produce the like effect in the charter governments, who do apprehend themselves by their particular charters and constitutions to be very little dependent upon the crown, and for that reason seldom pay that obedience to his majesty's orders, which might be reasonably expected from them;" that, notwithstanding what is here said concerning the repetition of these orders, they had good reason to believe those orders, at least to their governors, had never been repeated: that a bill, in which was a clause to inforce the orders and instructions of the crown in America had been repeatedly brought into parliament, and as often rejected: that the governor himself had represented this bill (to restrain the issues of paper-money) as of mischievous tendency: that even the very proprietaries had made a merit of opposing it: that, as in the act of parliament for that purpose which did pass in June 1751, the eastern colonies alone were included; so Pennsylvania was left in full possession of its rights, even by the parliament itself: that, as the date of the governor's commission was many years posterior the date of the instruction, they hoped and presumed, he was at full liberty to pass all their acts upon the terms granted them by the royal provincial charter, without putting them to the disagreeable necessity of examining the validity of such instructions, &c. And, lastly, as to the issue of their inquiry, concerning the necessity of contending for the present amendments, they not only declared themselves at a loss to find it out, but also called upon the governor to comply with the general voice of the people, and the repeated unanimous applications of their representatives in granting them and the province the seasonable relief provided for in the bill, by giving his assent to it as it stood.

How the governor was circumstanced may be gathered from his actions: he adhered to his amendments, and returned the bill as before, with a written message, in which he persevered in holding up the instruction as an insurmountable bar, till revoked, to the assent required of him; urging, that his predecessor had done the same, in 1746: that the assembly admitted the validity of it in ordinary cases; and, without pretending to dispute, only hoped he would find himself at liberty, on a re-consideration, to give his assent, notwithstanding, to a currency-bill when any extraordinary emergency required it: that then, it seemed plain, they did not think an instruction, founded on an address of the commons, was either illegal or temporary, or destructive of their liberties; that if these were then the sentiments of both governor and assembly, there was no room for the insinuation that he had been the first to press so dangerous an experiment; that if there was no instance before of a like clause offered, there was, perhaps, no instance of the like instruction, which otherwise, it was to have been supposed, would have met with the same dutiful obedience; that a restraining instruction was, perhaps, on no occasion so necessary as in the business of money, over which the king had peculiar prerogatives; that if they could make it appear to his majesty's ministry, that an addition to their currency was at that time necessary, the royal compliance was not to be doubted; that with regard to the former currency-bill by them cited, he was still of the same opinion; but that surely a very moderate share of penetration was sufficient to distinguish between an act to enforce all orders and instructions, and an instruction founded on an address of parliament; that they would certainly allow him to judge for himself in a point recommended to his observance on pain of incurring his majesty's highest displeasure; that he did not by any means blame them for contending for what they apprehended to be their rights and privileges, consequently could have no objection to their examining the validity of the king's instructions, provided they proceeded with such temper and moderation, as might give the world no room to

repeat the charge brought against the charter-governments by the lords of trade, of apprehending themselves very little dependent on the crown; and that, upon the whole, he was sincerely of opinion, the royal instruction was of the same force as when the late governor told the assembly, in the year 1746, he could not bring himself to such a pitch of boldness as to contravene it.

It is obvious, that the conjuring up the ghost of these departed instructions, was only to strike an awe into the assembly, and thereby prepare them for what farther practice, the new orders which could not but accompany the proprietary's paper already recited, might enjoin.

The king, the king's ministers, and the house of commons, were authorities too big for a provincial representative to compete with, and therefore it might be supposed their very names would serve.

But they were too wise and too steady to be amused, and the difference of language made use of by the proprietaries and their governor, was alone sufficient to warrant the different conduct they observed; for though the governor talked only of the sovereign power, the proprietaries talked only of themselves; "If WE shall be induced from the state of your trade to consent to an increase of your paper-currency."

Not thinking themselves obliged, therefore, to consider what additional inducements were necessary to incline those great men to suffer their deputy to discharge the duty of his commission, the assembly chose to lose their bill rather than pay more for it than it was worth.

Accordingly, the governor's amendments being again put to the question, were again rejected unanimously; and a committee was appointed to answer his message, which they did in such a manner as showed they were more anxious to do justice to their cause than make their court to the governor.

What governor Thomas did in passing the five thousand pounds act, they urged against what he said; the validity of instructions in ordinary cases, said to be admitted by the assembly of that time, they explain away, by saying, the distinction was only made use of to furnish the governor with a pretence, or inducement to pass the bill: that this was not the first instruction unlimited in point of time, and remaining as yet unrevoked, which neither was or would, as they hoped, be observed; since there was one still to be found in the council-books to governor Keith, dated July, 1723, requiring him, for the future, not to pass any private act without a suspending clause, till his majesty's approbation had been first obtained; that unfortunate, indeed, would the case of Pennsylvania be, if governors were never to be freed from the obligation of occasional instructions. "If the king," said they, "should judge all the purposes of his instruction answered, upon passing the paper-money bill in parliament in 1751, we must, nevertheless, for ever continue under the burden of it without redress. And if we should suppose the governor is restricted by the proprietaries from giving his assent to the emission of any farther sum in bills of credit, as we have very little reason to doubt, if then the proprietaries should be pleased to withdraw that restriction, and leave him at liberty to pass all our acts upon the terms granted to us by our charters, what will this avail if the governor continues to think he can never be freed from the obligation of his instructions?"

More materially still, they also subjoined the articles following, viz.

"We apprehend all royal orders and instructions subject the governors to whom they are directed, and their successors too, as the governor is pleased to inform us, to the royal displeasure, unless such instructions are revoked by his majesty's authority; and yet we cannot find that governor Keith, to whom it was directed, or governor Gordon his successor, or governor Thomas, or our present governor, have ever thought themselves under any danger of incurring his majesty's displeasure for a total neglect, and direct disobedience to the additional instruction of the lords justices in 1723, the original of which we make no doubt, as well as of the instruction of 1740, is in the governor's possession; and the substance of both we know to be printed with the minutes of our house. Why then an instruction, allowed to be in force in 1723, and still unrevoked, should be of no effect, and an additional instruction of the lords justices in 1740, possibly revoked by the conduct of the succeeding sessions of the same parliament, upon whose address to his majesty that instruction was founded, should be so strictly binding, is what we cannot apprehend.

"But if the liberty the governor contends for can mean, that we must allow him to judge for himself, how far he may or may not obey such royal instructions, at his own risk, (as his majesty's highest displeasure is threatened against him particularly) and at his own pleasure too, then we must own we are at a loss to distinguish any great difference between the mischievous tendency of an act to enforce all orders and instructions of the crown whatever, and the necessity the governor is pleased to think we are under to allow him the power of enforcing them whenever he shall think fit; with this preference, however, that we would far rather choose to submit ourselves, and our cause, to the king and the justice of a British parliament, than to the mere will of our governor, whether to enforce or disregard them, however they may have answered their ends, or otherwise abated

of their force; and in the present case, we hope the governor, on reflection, will pay some regard to the judgment of the same parliament from which the address to the crown had been preferred to issue this additional instruction, who, although requested in their next session by the board of trade, to address the crown again, that he would be pleased to repeat his instructions to the governors in his American colonies, have not only never complied therewith, that we know of, but have since passed an act for restraining the issuing bills of credit in those particular colonies, where, after a full inquiry, they found such emissions injurious to the trade of Great Britain, or not calculated to do justice between man and man, and have left us, as we presume, exonerated from the burden of this additional instruction, and in full power over our laws upon the terms of our charters; and so long as we ask nothing farther than is warranted by these, we hope it neither will nor can interfere with the royal prerogatives.

"It may be presumed, the representatives of this province, when met in their assemblies, have some valuable privileges yet left, in framing their laws, to do justice between man and man, without the aid of an additional instruction; and we hope it cannot be expected that we should very easily part with those rights and depend on royal instructions, over which we are to allow the governor the power he is pleased to contend for; and we have no reason to doubt, all men of understanding and candour will prefer a regular course of laws, occasionally suited to the times, and framed by the representatives of the people, annually chosen, and assented to by their governor, to a series of instruction sent for that purpose from so great a distance.

"For our own part, we are fully satisfied and assured, that so long as we continue in our duty and loyalty to the best of kings, who has been pleased to declare, *that nothing in this world can give him so much pleasure as to see (his subjects) a flourishing and happy people:* and neither claim, nor desire, other or greater privileges than those we have a right to, under the grant of his royal predecessors, we can have nothing to fear from a king and a British parliament; and, as it is our duty to defend these in the best manner we are able, in the faithful discharge of so high a trust, we shall have the satisfaction of our own minds, and, we hope, the countenance of all good men, notwithstanding the governor's opinion, that the charge made against this province (among other charter provinces) by the board of trade, is not much to our advantage."

And having before declared their persuasion or assurance, that the governor might pass the law in question, or any other law consistent with the royal charter, without the least apprehension of his majesty's displeasure, they finally suggest, that it must be not only a loss of time to the representatives, but a great expense to the country, to prepare bills for the governor's assent, which he was bound by private instructions from the proprietaries not to pass.

Unanimously this report was approved of; and yet, from a principle of moderation we must presume, it was left to be reconsidered by the next assembly; as also was another report, received the same day from the committee, appointed to draw up a reply to the paper last transmitted from the proprietaries, of which, as a debt both of honour and justice to the province, some account is now to be given.

Sixteen sections or paragraphs, it must be recollected, that paper was composed of; and one by one they are severally considered, acknowledged or refused.

The declaration contained in the first is acknowledged to be a noble one, and worthy the rank held by the proprietaries: the insinuation in the second is declared to be not only groundless but also injurious; the assembly, instead of opposing the proprietary interest, having consulted that interest, even in the very point in question, if it was consistent with their interest to have a good understanding with the people; to obtain which a method was proposed: to the intimation contained in the third, that after they had ordered their governor to give the answer which he did to the former application, they had no reason to expect a repetition directly to themselves, &c.; it was replied, that repetitions, when they are supported with new reasons, and contain answers to those given for refusing the request that had been made, are justifiable in all cases, except where the persons applied to were sure to be infallibly right, or incapable of hearing reason: to the fourth, containing the opinion of the lords of trade concerning the obligations incumbent on the proprietaries as chief governors, to pay a part of public charges, the committee say, that the house did not require their contribution as governors but as proprietaries; which was according to William Penn's own distinction formerly made; and considering them, as in the same paragraph is afterwards done, to be the wealthiest inhabitants of the province, it follows undeniably, that such their contributions were therefore due to the province in proportion to their substance in it: in their answer to the fifth, they both combat with and complain of a misrepresentation contained in it, as a thing unworthy the dignity of the proprietaries and chief governors of a province, urging, that they did not assert, purchases were made directly with the people's money; but only, that they were made on the more reasonable terms, because of the pro-

vincial presents attending them; and that this was advanced as an additional reason why the proprietaries should bear, at least, a proportional part of the expense of such presents; sharing in the first place, as they did, in the good from these treaties resulting to the whole, and engrossing, over and above, a very considerable advantage to themselves.

To the sixth, which insinuates, that the people are able enough to pay these expenses without the assistance of the proprietaries, they retort most unanswerably, that because they are able to pay, it does not follow, that, therefore, they are obliged to pay unjustly; as also, that they, the proprietaries, are as able as themselves, and asking, why that reason, which, it was plain, was not sufficient to induce them to pay a part, should be held of force enough with the people to induce them to pay the whole? after which they declare the charge against them in the said paragraph of aiming to captivate the weakest of the people, &c. to be an absolute mistake, unsupported with the least degree of probability, the proprietaries not having had any formidable share in the people's esteem for many years past, nor the supposed address to the people made, nor the representation itself published, nor even the votes on which it was founded, till after the election was over, &c.

Upon the seventh, concerning the expediency of showing a due regard to the proprietaries and their interest, they comment as follows, "that is, as we understand it, though the proprietaries have a deputy here, supported by the province, who is, or ought to be fully impowered to pass all laws necessary for the service of the country, yet, before we can obtain such laws, we must facilitate their passage, by paying money for the proprietaries which they ought to pay; or, in some other shape make it their particular interest to pass them: we hope, however, that, if this practice has ever been begun it will never be continued in this province; and that since, as this very paragraph allows, we have an undoubted right to such laws, we shall be always able to obtain them from the goodness of our sovereign, without going to market for them to a subject."—They afterwards expatiate on the word rank as applied by the proprietaries to themselves in the same paragraph; concerning which they say, "we cannot find on perusing the representation in question, that it contains any treatment unsuitable to their rank. The resolve of the house was, that to prevent dissatisfactions on all sides, they should be requested, in the most reasonable and most respectful manner, to agree upon a proportion of Indian charges to be paid by them and the province according to justice: and it may be submitted to the judgment of all impartial persons, whether the representation drawn in pursuance of the resolve, was not both reasonable in itself and respectful in the manner. It was not, as the proprietaries represent it, an address to the public. It is not to this day made public. It was a private application to themselves, transmitted to them through the hands of their governor. Their true interest (which they will always find to consist in just, equitable, and generous measures, and in securing the affections of their people) was consulted in it, and one suitable means proposed to obtain that end. As to rank, the proprietaries may remember, that the crown has likewise been pleased to give the assemblies of this province a rank; a rank which they hold, not by hereditary descent, but as they are the voluntary choice of a free people, unbribed, and even unsolicited: but they are sensible that true respect is not necessarily connected with rank, and that it is only from a course of action suitable to that rank they can hope to obtain it."

Coming then to the eighth, they express their surprise at the concern affected by the proprietaries, on their being, as they say, laid under a necessity of acquainting the public with a state of the provincial revenue, the said revenue being annually settled, stated, printed, and published by the assembly, and having so been for thirty years past: adding, that whatever reasons the proprietaries might have to make a secret of their revenue, the province had none.—The manner in which the proprietaries reason concerning taxes they object to in the next place, as inaccurate and inconclusive: asserting, that taxes, how reasonably soever imposed or willingly paid, are, nevertheless, taxes: that all taxes ought upon the whole, to produce more good to those who pay them, than the same sum left at their own disposal, in which case they are no burden, &c. and concluding thus; "after estimating our whole present revenue, as if it had been the same for twenty years past, and would certainly continue, though the proprietaries know it depends on temporary acts near expiring, the renewal of which is at best dubious, they conclude that four hundred pounds a year, for Indian expenses, is a small sum, and that we are under no necessity of being frugal, on this account, of the public money. This four hundred a year is the sum that they find has been paid on an average for twenty years past, and they take no notice of its being a growing charge, and that for the four last years before the representation, it amounted to nearly twelve hundred a year, which we conceive disinterested persons will think a very large sum: and although the same excise might have been raised, if not half that money had been expended, it does not seem to us to follow, that the proprietaries ought not to have paid their just proportion of it; if the sum be small, their proportion of it must have been smaller: and the money so saved might have been ap-

plied to some other use, beneficial to the public; or have remained ready in the treasury for any emergency."

In return to the ninth they say, the people of Pennsylvania pay, proportionably, as much towards the support of his majesty's government, in the shape of duties and excise, as the proprietary family, or any other subjects; indeed as much as an infant colony can bear; and more they hoped and believed the justice of a British parliament would never burden them with: adding, "the proprietaries exemption was not published till now at their own instance; it was made use of as a private motive to themselves only in the representation."

To the tenth, which regards the Indian interpreter, among other things equally pertinent, they say, "we suppose the instance alluded to, wherein the assembly did not fully satisfy him, must have been such as the proprietaries were concerned in by the purchase of lands; and a part might be accordingly left for them to pay."—And for themselves and all other assemblies, they declare their hope and belief, that no service from the proprietaries to the province, will ever be suffered to pass without grateful acknowledgments and proper returns.

Of the proprietary right to a monopoly of land, whether from the crown or assembly, they, in answer to the eleventh article, waive all dispute; it being every way conclusive alike, "that those in whose favour such monopoly was created, ought, at least, to bear a part of the expense necessary to secure them the full benefit of it."

Lastly, having already given the concluding five articles of the proprietary paper in the entire, it is but reasonable to subjoin the entire answers, which were as follow. To wit:

"12. In the twelfth paragraph, three things appear somewhat extraordinary to your committee. 1. That the proprietaries should deny that treaties for land are made at less expense on account of provincial presents accompanying them; which we think any disinterested judge would at least allow to be probable. 2. That they should say the last purchase was made on no other account, but purely to save the province the expense of a present; as if they had no occasion to purchase more land of the Indians, or found no advantage in it. 3. That to prove such purchases were not the cheaper on account of provincial presents accompanying them, they should give an instance in which, they themselves say, the purchase was the dearer for want of such presents. If purchases are dearer to the proprietaries when no provincial presents accompany them, does not this clearly confirm the assertion of the assembly, that they are the cheaper when there are such presents? and does it not prove what the proprietaries deny?"

"13. It appears by their thirteenth paragraph, that the proprietaries think the part they voluntarily submit to bear, and expect always to bear, of public expenses, is greater than their proportion, equitably laid, would amount to. If this be so, and they are, as they say, 'far from desiring to avoid contributing to any public expense which it is reasonable they should bear a part of, although their estate is not by law liable to be taxed,' your committee are at a loss to conceive, why they should refuse, 'to enter into an agreement for the payment of any particular proportion of Indian or other public expenses,' when such agreement might save them money, and is proposed to prevent dissatisfactions, and to preserve union and harmony between them and the people; unless it be to show their utter contempt of such union and harmony, and how much they are above valuing the people's regard.

"The charge on former assemblies, that they neglected the defence of the proprietaries' city, your committee cannot but think unkind, when it is known to the world, that they gave many thousand pounds during the war to the king's use, besides paying near three thousand pounds at one time, to make good the damages done to the masters of servants, by the irregular and oppressive proceedings of the proprietary's lieutenant; and that their not providing cannon to defend the city was not from neglect, but other considerations set forth at large in the printed proceedings of those times, needless now to be repeated. At the same time it may be remembered, that though the defence of the proprietaries' city, as they are pleased to term it, by batteries of cannon, was more their interest (we will not say duty) than any other persons whatsoever, and they now represent it as a thing so necessary, yet they themselves really neglected, and even discouraged it; while some private gentlemen gave sums nearly equal to that they mention, and many contributed vastly more, considering their circumstances, by which means those batteries were not only completed in season, but the defence of both town and country in that way provided for; whereas this boasted assistance of four hundred pounds' worth of cannon, was sent, like Venetian succours, after the wars were over. Yet we doubt not, but the proprietary who sent them has long since had the thanks of those who received them, though we cannot learn that they ever were favoured with any from him, for what they did and expended in defence of his share of the province property."

"14. The fourteenth paragraph of the proprietaries' answer seems calculated merely

for the same design with which they charge the representation, viz., to amuse the weaker part of the people.—If they are really disposed to favour the drinkers of spirituous liquors, they may do it without a law, by instructing their lieutenants to abate half the license fees, which would enable the retailers to sell proportionably cheaper; or to refuse licenses to more than half the present number of public houses, which might prevent the ruin of many families, and the great increase of idleness, drunkenness, and other immoralities among us."

"15. In return to the good resolutions expressed by the proprietaries in their fifteenth section, your committee hope that future, as well as past assemblies, will likewise endeavour to make the public good the rule of their actions, and upon all occasions consult the true interest and honour of the proprietary family, whatever may be the sentiments or conduct of any of its particular branches. To this end, we think the honest and free remarks contained in this report, may be more conducive than a thousand flattering addresses. And we hope, that when the proprietaries shall think fit to reconsider this matter, they will be persuaded, that agreeing to an equitable proportion of expense will be a good means of taking away one handle of dissension from 'men of warm, uneasy spirits,' if such should ever unhappily procure themselves to be elected."

"16. Yet if the proprietaries are really desirous of preserving an union and harmony between themselves and this people, we cannot but be surprised at their last paragraph, whereby they endeavour to cut off the assembly's access to them, in cases where the answers received from their deputies may not be thought agreeable to the public good. No king of England, as we can remember, has ever taken on himself such state, as to refuse personal applications from the meanest of his subjects, where the redress of a grievance could not be obtained of his officers. Even sultans, sophies, and other eastern absolute monarchs will, it is said, sometimes sit whole days to hear the complaints and petitions of their very slaves; and are the proprietaries of Pennsylvania, become too great to be addressed by the representatives of the freemen of their province? if they must not be reasoned with, because they have given instructions, nor their deputy because he has received them; our meetings and deliberations are henceforth useless; we have only to know their will and to obey.

"To conclude; if this province must be at more than two thousand pounds a year expense, to support a proprietary's deputy, who shall not be at liberty to use his own judgment in passing laws [as is intimated to us in the fourteenth section of the answer we have been considering] but the assent must be obtained from chief governors, at three thousand miles distance, often ignorant or misinformed in our affairs, and who will not be applied to or reasoned with when they have given instructions. We cannot but esteem those colonies that are under the immediate care of the crown in a much more eligible situation; and our sincere regard for the memory of our first proprietary, must make us apprehend for his children, that if they follow the advice of Rehoboam's counsellors, they will, like him, absolutely lose,—at least, the affections of their people. A loss, which however they affect to despise, will be found of more consequence to them than they seem at present to be aware of."

The assembly returned in October, for the remainder of the year 1753, and to last till October 1754, being composed of nearly the same persons as the last, met with the same dispositions, and proceeded on the same principles.

To have a sufficient currency was, as we have seen, the great provincial point; and from the facts already stated, it is sufficiently clear, that the proprietary-concurrence therewith was not to be obtained, but upon such terms as even silver and gold could never be worth. The loan-office, which was in the hands of the assembly, was still considered as an over balance for the land-office, in the hands of the proprietary, though they never came into competition, and no benefit could any way result to the province, but the proprietaries were sure to have their share of it.

What encouragement the near prospect of a war furnished to either; and what use was made of it; and at whose door the obstructions given to the public service are to be laid, will best be deduced from the sequel.

With the consideration of the state of their commerce, and the accumulated proofs resulting therefrom, that with the increase of their currency, the trade of the province, as well by importations from England as the exportations of their own product, had amazingly increased, the assembly opened their sessions in February, 1754; and taking in also the consideration of their currency with it, came to the following unanimous resolutions. To wit:

"That it is necessary that the paper-money of this province should be re-emitted for a farther time.

"That there is a necessity of a farther addition to the paper-money at present current by law within this province.

"That there is a necessity, that a sum should be struck to exchange the ragged and torn bills now current by law in this province."

Upon which resolutions, they afterwards ordered in a bill for striking forty thousand pounds, to be made current and emitted on loan, and for re-emitting and continuing the

currency of the bills already in circulation; and on the other hand, the governor sent them down a written message, accompanied with a letter to himself from the earl of Holdernesse, a second from the lords of trade, and a third from the French commandant on the Ohio to Mr. Dinwiddie, deputy governor of Virginia.

The earl of Holdernesse's letter was dated August 28, 1753, and as it may be presumed, was nearly the same with the other letters, sent at the same time, to the governors of the other provinces.

The contents of it were, "That his majesty having received information of the march of a considerable number of Indians, supported by some regular European troops, with an intention, as it was apprehended, to commit some hostilities on parts of his majesty's dominions in America, his lordship had received the king's commands to send him (the governor) intelligence thereof; as also to direct him, to use his utmost diligence to learn how far the same might be well grounded; and to put him upon his guard, that he might be at all events, in a condition to resist any hostile attempts that might be made upon any parts of his majesty's dominions within his government; and to direct him in the king's name, that in case the subjects of any foreign prince or state should presume to make any encroachments on the limits of his majesty's dominions, or to erect forts on his majesty's lands, or commit any other act of hostility, he was immediately to represent the injustice of such proceedings, and to require them forthwith to desist from any such unlawful undertaking; but if, notwithstanding such requisition, they should still persist, he was then to draw forth the armed force of the province, and to use his best endeavours to repel force by force.—But as it was his majesty's determination not to be the aggressor, he had the king's commands most strictly to enjoin him, the said governor, not to make use of the armed force under his direction, excepting within the undoubted limits of his majesty's dominions: and that, whereas it might be greatly conducive to his majesty's service, that all his provinces in America should be aiding and assisting each other in case of any invasion, he had it particularly in charge from his majesty to acquaint him, that it was his royal will and pleasure, that he should keep up an exact correspondence with all his governors on the continent; and that in case he should be informed by them of any hostile attempts, he was immediately to assemble the general assembly, and lay before them the necessity of mutual assistance, and engage them to grant such supplies as the exigency of affairs might require."

The letter from the lords of trade, was dated September 18, and imported, "That his majesty having been pleased to order a sum of money to be issued for presents to the Six Nations of Indians, and to direct his governor of New York to hold an interview with them, for delivering the same, for burying the hatchet, and for renewing the covenant chain, they thought it their duty to signify the same; and it having been usual upon the like occasions formerly, for all his majesty's colonies, whose interest or security were connected with or depended upon them, to join in such interview; and that, as the present disposition of those Indians and the attempts made upon them to withdraw them from the British interest, appear to them to make such a general interview more particularly necessary at that time, their desire was, that he, the governor, would lay this matter before the council and general assembly or the province under his government, and recommend to them forthwith to make a proper provision for appointing commissioners to be joined with those of the other governments, for renewing the covenant chain, &c. and that the said commissioners might be men of character, ability, integrity, and well acquainted with Indian affairs."

The letter of the French commandant was in answer to the representations of governor Dinwiddie, concerning the French encroachments on the Ohio, (for the European regulars mentioned in lord Holdernesse's letters, were of that nation, though so much caution had been used to suppress the very name) and in very polite terms denied the whole charge.

In the governor's written message accompanying these papers, something was said of each; and of the last rather more (whatever the matter of fact really was) than it seems to contain. The French commandant says, "it belongs to his general at Canada, not to him, to demonstrate the reality of the king his master's right to the lands situated along the Ohio: that he shall forward the letter he has received to him; that his answer would be a law to him; that as to the requisition made to him, to retire, he could not think himself obliged to submit to it; that he was there by his general's orders, which he was determined to obey; that he did not know of any thing that had passed during the campaign, which could be esteemed an hostility; that if the governor had been more particular in his complaints, he had been more particular in his answer, &c."

The governor's comment is in these words, "An express has this week brought me governor Dinwiddie's account of that gentleman's [col. Geo. Washington's] return with the answer of the commander of the fort, who avows the hostilities already committed, and declares his orders from the king of France are to build more forts, take possession of all the country, and oppose all who shall resist,

English as well as Indians, and that he will certainly execute these orders as early as the season will permit."

It is certain, at least, this language was never echoed at home:—and not a little extraordinary it is, to find this gentleman in his very next paragraph, making so very free with the French name, which the secretary of state had been so extremely careful to avoid the mention of.

"Gentlemen (he proceeds to say) French forts and French armies so near us, will be everlasting goads in our sides; our inhabitants from thence will feel all the miseries and dreadful calamities that have been heretofore suffered by our neighbour colonies; all those outrages, murders, rapines, and cruelties, to which their people have been exposed, are now going to be experienced by ourselves, unless a force be immediately raised sufficient to repel these invaders. It is to be hoped, therefore, that as loyal subjects to his majesty, and in justice to your country, you will not fail to take into your consideration the present exigency of affairs; and, as it will be attended with a very considerable expense, and require a large number of men, make provision accordingly, that I may be enabled to do what his majesty, as well as the neighbouring colonies, will expect from a government so populous, and likely to be so nearly affected with the neighbourhood of French garrisons."

In subsequent paragraphs, he farther informs the assembly, that the governors of Virginia, New York, and the Massachusetts, had made a tender of their assistance to the province, and expressed an earnest desire to act in concert with it; enforces the necessity of a general union of all the provinces, both in council and forces; recommends the appointment of some trusty person to reside, in behalf of the province, among the Indians upon the Ohio; as also the preparation of a bill for better regulating the Indian trade; and concludes with the following stimulative, to wit:

"*Gentlemen*,

"There is so much to be done, and so little time to do it in, the season being so far advanced, and governor Dinwiddie expecting the forces from this province to join those of Virginia, early in March, on Potowmack, that I most earnestly entreat you will not delay the supplies, nor deal them out with a sparing hand, but use all the expedition in your power; for you will undoubtedly agree with me, that so alarming an occasion has not occurred since the first settlement of the province, nor any one thing happened that so much deserves your serious attention."

A treaty with the Ohio Indians, it is to be observed, had been just concluded at the expense of the province, by three commissioners, two of them selected out of the assembly by the governor; and the necessity of regulating the Indian trade had, in the course of the conferences, been made undeniably apparent, by the representations and complaints of the Indian chiefs.

And the reader will of himself be furnished with proper reflections on the earl of Holdernesse's letter to the governors of the several provinces, imposing the double care upon them, of defending themselves against the encroachments of the enemy, and also against all objections at home, in case of doing it improperly. To say nothing of the peculiar difficulty laid both on the province and governor of Pennsylvania, where there never had been any armed force on a provincial establishment at all.

The assembly took the whole into immediate consideration, and agreed upon the following answer, which was sent up to the governor the same day. To wit:

"The distressed circumstances of the Indians, our allies, on the river Ohio, demand our closest attention, and we shall not fail to proceed in the matters contained in the governor's message with all the despatch an affair of so much importance will admit of, in which we doubt not to comply with every thing that can be reasonably expected on our part.

"In the mean time, having some days since prepared a bill, which we conceive absolutely necessary, not only to the trade and welfare of this province, but to the support of government, upon the success of which our deliberations at this time must in a great measure depend; we now lay it before him as a bill of the utmost importance, and to which we unanimously request he would be pleased to give his assent.

Four days the governor and his council employed in considering what return should be made to it; or, rather in searching out such an expedient as should force the province into the measures of the proprietaries, or else, by their refusal, embroil them with the government. In his very first paragraph he gave an absolute negative to their bill. He told them, that the product of their present funds was greatly more than sufficient for the support of government; that he hoped to find them better subjects to his majesty, and greater lovers to their country, than to make the issue of their bill, in which he and they had an equal right to judge for themselves, the rule of their conduct. "If, however, (continued he) you should be of opinion, that there will be a necessity to strike a farther sum in bills of credit, to defray the charges of raising supplies for his majesty's service in this time of imminent danger, and will create a proper fund or funds for sinking the same in a few years, I will concur with you in passing a law for that purpose, thinking myself sufficiently warranted so to do, in cases of real emergency.

"And now, gentlemen, I hope you will, upon due consideration, be of opinion with me, that the chief end of your bill will be hereby, in a great measure answered, as the sum to be struck and circulated upon this occasion, will be such an addition to your present currency, as probably may be thought sufficient for some time."

The assembly also, in their turn, took a sufficient time for deliberation, and having touched on the unusual manner in which the governor had been pleased to reject their bill, and assumed some merit to themselves, in not suffering any separate interests of their own to interfere with the common good, observed, there was some difference between the royal orders and the governor's manner of representing them; chose therefore to adhere to the former; availed themselves most prudently and sensibly of the cautions so circumstantially recommended and enforced in them; more especially concerning the undoubted limits, and the restrictions thereupon, that his majesty may not be rendered the aggressor; said it would be highly presumptuous in them to judge of those undoubted limits; that instead of being called upon to resist any hostile attempt made upon any part of Pennsylvania, they were called upon to grant such a supply as might enable the governor to raise forces to be ready to join those of Virginia; that therefore they hoped the governor, under these circumstances, would concur with them, that the most prudent part for them would be to wait the result of the government of Virginia, where no provision had as yet been made that they knew of, nor in any of the neighbouring colonies, though the several governors, in pursuance of the king's command, had made the necessary requisitions of their several assemblies, and they were equally bound by all the ties of general interest. They also superadded the regard due to the scruples of those conscientiously principled against war, yet deeply sensible of the blessings they enjoyed, and willing to demonstrate their duty and loyalty, by giving such occasional sums of money for the king's use, as might be reasonably expected from so young a colony; took notice they had contracted a debt of fourteen hundred pounds for presents to the Indians, and other charges arising from the late treaty, which they should cheerfully discharge, though their proprietaries had refused to contribute any part of their Indian expenses; agreed to send commissioners to Albany, as required, though the place was so remote, and to defray the expense, &c.

The difficulty thus retorted on the governor, and his resentment it must be supposed quickened thereby, he takes up the minutes of the last day's sessions of the last assembly, and under the pretence of justifying his own character, revives the old controversy concerning the paper-money instructions, by a long and angry paper sent to the house March 1; and, forgetting what he had formerly said in the following paragraph, "I do not blame you, gentlemen, for contending for what you are persuaded are your rights and privileges, and consequently can have no objection to your examining the validity of the king's instructions;" flames out as follows, "Had I been an enemy to the liberties and privileges of the people, or been desirous of gratifying my own passions at their expense, it must be confessed you have furnished me with the fairest occasion a governor so disposed could possibly have wished for. For example, you have voted a clause, proposed to be added to your bill by his majesty's express direction, at the request of his two houses of parliament, to be destructive to the liberties of the people of this province, &c. and have even threatened to examine the validity of the king's instruction, if, by a perseverance in my opinion, I laid you under the necessity of doing it. What is this less than declaring, that the lords and commons, and his majesty's privy council, consisting, among others, of the most eminent lawyers in Great Britain, have requested, and his majesty enjoined, an act directly contrary to law?"

And he concludes with making a merit to the province of the moderation he had shown, in suppressing his sense of the provocations then offered to him, in hopes of a more dispassionate behaviour for the future.

The very next day this paper was followed by another more immediately in point: the governor, therein, undertaking first to defend his negative, and the use he had made of it; and, secondly, so to turn the tables on the assembly, that all the wrong should be on their side, and all the right on his own.

The use made of the different language used by the secretary of state and him, he calls an evasion; and what they ought not, in point of duty, to have taken any advantage of. He then declares he has undoubted assurance, that part of his majesty's dominions, within his government was, at that time, invaded by the subjects of a foreign prince, who had erected forts within the same; and requires them to take notice, that he did then call upon them, pursuant to his majesty's orders, in the present emergency to grant such supplies as might enable him to draw forth the armed force of the province, &c. He then undertook to prove, that the place where the French had then their head-quarters was within the limits of the province; and tells them, that if he did not communicate materials before to assist their inquiries into this fact, so neither had they applied to him for them; that if they had inquired for themselves and suppressed the truth, it was extremely disingenuous; if not, their neglect

could be imputed to no other cause than a desire to have a plausible excuse for not paying a proper regard to his majesty's commands; that even on account of the scruples urged, he had looked on governor Dinwiddie's requisition as a very lucky circumstance; seeing, that a requisition from himself would have set the province in the front of opposition; and a refusal from them, would have exposed it to the contempt and derision, as well of the French as our Indian allies; that as the French avow these hostilities, so the Indians, menaced by them, most earnestly besought us, to build places of refuge, to which their wives and children might repair for safety, and also to assist them against their enemies; that instead of being governed by the example of the neighbouring colonies, nothing remained but to give the necessary supplies, and thereby set the example to them, this province having been first invaded, and consequently in the most immediate danger; that without this, they could neither keep their treaties with the Indians, nor demonstrate their duty and loyalty to his majesty; that having now done his duty, whatever ill consequences might happen, were to be laid at their door; that with regard to the refusal of the proprietaries, to contribute any part of their Indian expenses, it was true, they had refused to do it in the manner expected, and they had given their reasons; but that the proposal made by him, the governor, by their order, in the years 1750 and 1751, in regard to the building a strong trading house near the place then invaded and possessed by the French, could not be forgot; which generous offer* had the assembly thought fit to close with, it might, at a small expense, have prevented all the mischiefs impending, and secured a country to the English, which probably might not be recovered without a heavy charge, and the loss of many lives.

Whether the hostilities committed by the French were or were not committed within the bounds of Pennsylvania, became the great question.—The assembly called for evidence; the governor imparted all he could collect; and, after a strict examination of the premises, the assembly chose only to glance at the inflammatories thrown in their way, and to profess their readiness to concur with the governor in whatever might preserve the harmony between the several branches of the legislature, so necessary at all times, and especially at a crisis so important, so far as the preservation of their rights and the duty they owed their constitutents would permit. Not departing, however, from their former sentiments, nor admitting any one of the articles laid against them; but, on the contrary, maintaining, that the secretary of the state's letter could be the only rule of their conduct; and tacitly upbraiding the governor for having suddenly altered the whole connexion between Pennsylvania and Virginia, in consequence of such supposed misconduct of theirs: and concluding their replication in these words: "as governor Dinwiddie had laid before his assembly the earl of Holdernesse's letter, sent, as we presume, in the same terms to all the colonies on the continent, we judged it most prudent to wait till the assembly of that government had enabled him to act in obedience to the royal commands, especially as they had that letter under their consideration from the first of November last, as appears by the journal of their house of burgesses now before us; but we are now called upon as principals, and the governor is pleased to inform us, that he has undoubted assurance that part of his majesty's dominions within the government is at this time invaded by the subjects of a foreign prince, who have erected forts within the same; and calls upon us, pursuant to his majesty's orders in the present emergency, to grant such supplies as may enable him to resist those hostile attempts, and repel force by force: but, as it appears to us that the governor is enjoined by the royal orders, not to act as a principal beyond the undoubted limits of his government; and as, by the papers and evidences sent down and referred to by the governor, those limits have not been clearly ascertained to our satisfaction; we fear the altering our connexions with his majesty's colony of Virginia, and the precipitate call upon us, as the province invaded, cannot answer any good purpose at this time, and therefore we are now inclined to make a short adjournment."

The adjournment they proposed was to the sixth of May; and, before they broke up, the governor again addressed them with another message, in which he also affected to wave several things personal to himself, which, at another time, he might have thought it incumbent on him to take notice of; and proceeded to tell them, that had they examined with their usual accuracy the gentleman, who by his appointment attended their house, and compared their testimony with the written papers at several times communicated to them, he thought it would have appeared so clear to them, that the French had lately erected one or more forts far within the limits of the province, that nothing less than an actual mensuration could have made it more evident; that even taking it for granted, however, the forementioned encroachments were not within the said limits, yet he, having been informed by the governor of Virginia, that hostile attempts had been made on part of his majesty's dominions, and called upon him for the assistance of this province, it was equally their duty, to grant such supplies as the present exigency of affairs required; and, that he

* See the assembly's answer to this charge hereafter, in the time of governor Morris.

could not but be apprehensive, that so long an adjournment would frustrate his majesty's just expectations from them.

This message was dated March 9, and April 2 we find them sitting by his special summons again: the occasion of which was the next day explained in the usual way by message, as follows: "I am now to acquaint you, gentlemen, that since your adjournment I have received from governor Dinwiddie the several papers herewith laid before you; by which it will appear, that he is taking all imaginable pains for the security of his majesty's dominions, so far as the provision made by his assembly will permit him to act; and he is very impatient to know the issue of your deliberations on this subject. I cannot therefore doubt but, that agreeable to the profession in your message of the twenty-seventh of February, 'of being ready and willing to demonstrate your duty and loyalty, by giving such sums of money to the king's use, upon all suitable occasions, as may consist with your circumstances, or can reasonably be expected from this province;' I say I cannot doubt but you will, with the greatest alacrity, lay hold on the present opportunity of evincing the sincerity of those professions, by granting such an aid to his majesty, as may comport with the circumstances of the province, and be suitable to the exigence of the service. And, in the doing of this, I hope you will be guided rather by the importance of the concern, than by the example of other colonies: it being found by experience to be a very ill-judged piece of economy to cramp an enterprise of this nature in the article of supplies; and that whatever is given on such occasions, short of being sufficient to accomplish the ends proposed, becomes, for the most part, a waste of so much treasure, without answering any of the purposes for which it was intended.

"I have at present only to add my request, that whatever you intend to do on this occasion, may receive all the despatch the nature of the thing will admit of; the season of the year for action advancing so fast, that unless our measures be speedily taken, they will, I fear, be rendered altogether unserviceable."

Upon the fifth, after many debates, it was resolved, by a small majority, that a sum of money should be given for the king's use; and what the sum should be, occasioned many debates more. Twenty thousand pounds being proposed on the ninth, it passed in the negative by a majority of twenty-five to eight; reduced to fifteen thousand pounds, it passed in the negative twenty-three to ten; reduced to ten thousand pounds, it passed in the negative twenty-two to eleven; and again reduced to five thousand pounds the next day, it again passed in the negative twenty-two to ten. Those who had hitherto led the house, voting affirmatively; and, on the contrary, those who had hitherto voted affirmatively going over to the remainder of the negatives.—And this apparent perplexity was, in their reply to the governor's message, thus accounted for: "And we now beg leave to inform the governor, that we have had that message under our serious consideration ever since it came down to the house; but after all our debates thereupon, we find that nearly one half of the members are, for various reasons, against granting any money to the king's use at this time; and those who are for granting, differ so widely in their sentiments concerning the sum, that there seems at present no possibility of their agreeing, except in such a sum, as, in the judgment of many of them, is quite disproportionate to the occasion: therefore, and that the members may have an opportunity of consulting their constituents on this important affair, we are now inclined to adjourn to the thirteenth of the next month."

According to their adjournment, the house met again, May 6, and were informed by the governor of the arrival of a body of French forces, consisting of upwards of one thousand men, before the fort building by the Virginians on the Ohio, and the surrender thereof. He also laid before them the despatches he had severally received from governor Dinwiddie of Virginia, concerning the state of that province, and the succours he wanted and expected; and from governor Delancy of New York, concerning the interest of his majesty's colonies in general, as well as of Pennsylvania in particular; and said, "he hoped they would have their due weight with them in their deliberations and advice." The proposals made by the governors of Boston and New York for an union of the several colonies in Indian affairs, he then recommended to them earnestly, as agreeable to his own sentiments, and likely to be productive of more real benefit, at much less expense than the method hitherto in use of making frequent and distinct presents to the Indians, &c. And he desired to be enabled to instruct the commissioners to be sent from their province, to concur with those of the other colonies, in case a reasonable plan should be offered.

A joint bill for granting an aid to the king, and replacing torn and ragged bills of credit, was the result of their first day's debate; and after several divisions, the several sums were settled at ten thousand pounds for the king, and twenty thousand for the other purpose.

The commons of Great Britain will not suffer a money-bill to be amended: the lords may reject, his majesty may refuse his assent, but what they give, they give upon their own terms.

In Pennsylvania a money-bill exacted from the province, by all the considerations which could affect generous minds, or intimidate

weak ones, the dread of an enemy at the gates, and of incurring both the royal displeasure and the public odium, for not making a seasonable provision against his approaches, could not be accepted without amendments.

Even this bill, at such a crisis offered, and for such a service, was returned by the governor, with amendments prefaced with a written message, of which the two following were the most material paragraphs: viz.

"Considering the royal instruction laid before the assembly last year, it must be apparent that I have, merely from a desire to oblige you, consented to raise the money intended for his majesty's use in a manner by you proposed. And have prolonged the currency of the bills of credit, to be issued in virtue of the bill now under consideration, as far as I think consistent with my own safety.

"And, as the fund to be established upon the foot of my proposed amendment will be more than sufficient to repay the sum granted by the bill, I can see no reason for extending the act of excise longer than four years beyond the date of its present limitation, or for burdening the people unnecessarily with a tax that possibly may not be wanted."

And these proposed amendments restored unanimity to the house; for whereas they had been divided many ways in the course of the bill, they now acted with one will and one voice, in rejecting that concerning the excise, which manifestly took its rise from proprietary considerations only; and for the sake of which, either the service of the public was to be neglected, or the province to give up its understanding.—The latter exceeded the power of persuasion; and the former they left those to answer for, to whom it belonged.

Their reply to the governor on this occasion was as follows: "The house are not inclined to enter into any dispute with the governor on the subject of his proposed amendments to the money-bill; as the representatives of the people have an undoubted right to judge, and determine, not only of the sum to be raised for the use of the crown, but of the manner of raising it.

"The governor, in his message of the nineteenth of February, was pleased to tell us, 'That, if the house should be of opinion that there will be a necessity to strike a farther sum in bills of credit, to defray the charges of raising supplies for his majesty's service in this time of imminent danger, and would create a proper fund or funds, for sinking the same in a few years, he would concur with us in passing a law for that purpose, thinking himself sufficiently warranted so to do in cases of real emergency.'

"On this assurance, the house have prepared a bill, and presented it to the governor, to strike the sum of ten thousand pounds, to give the same to the king's use, and to sink it by an extension of the excise act for a farther term of ten years. The governor will be pleased to consider, that his predecessor, to whom the mentioned instruction was given, did afterwards pass an act of the same kind, extending the excise act ten years (now near expired) for a grant of five thousand pounds only; and we never heard that he incurred the royal displeasure for so doing. As the sum we grant is double, we had no expectation that our proposing the same term would have been deemed extravagant. The governor thinks four years sufficient; but, as the representatives are best acquainted with the circumstances of the people, and must themselves, as a part of the people, bear a share of all burdens laid upon them, it seems not reasonable to suppose they will lay such burdens unnecessarily. They now offer ten thousand pounds to the crown, and propose a manner of raising it, that they judge most easy and convenient for the people they represent: and, if the governor thinks fit to refuse it, merely from an opinion that a shorter term for sinking the bills would be more easy for the people, we cannot but suppose, that, since the messages in which he so warmly recommended this affair to us, he has, on farther advices, or better consideration, changed his sentiments of the importance of the present occasion for supplies, and doth not now think the danger so imminent, or the emergency so great or so real, as he then apprehended it to be."

They also intimated at the same time, that, it being an inconvenient season for the members to be absent from their respective homes, they desired the governor to let them know his result as soon as possible.

And upon the next day but one this result came, and proved to be of a nature altogether extraordinary. Having charged the assembly with laying down a position in their last message, derogatory to the rights of government; in maintaining, that the representatives of the people have an undoubted right to judge and determine, not only of the sum to be raised for the use of the crown but of the manner of raising of it, he first acknowledges that right, and then whittles it away, by arguing, it was not an exclusive right; one half of the legislative powers being vested in the governor. After which he goes on to say, that he had neither objected to the sum, though he wished it had been larger and more seasonably granted, nor to the manner of raising it, though he could have also wished it had not been by compelling him to depart from the letter of his majesty's instruction, but only to the extension of the fund, whereby the money is proposed to be repaid, to an unneces-

sary length, by which a tax was to be laid and continued upon the people without the least apparent necessity: and that he was sorry to find, they were not satisfied with a fund by which the ten thousand pounds granted to his majesty would be repaid in the easiest manner in six years, and leave a surplus of several thousand pounds in their hands to be disposed of as they thought fit; and that, for the said ten thousand pounds so granted, they were desirous of obtaining more than three times the sum for themselves: that the example of any former governor was not to be a rule for him: but that, however, if they would enlarge the sum given for his majesty's use, he would extend the time for repaying it in the same proportion already allowed in his amendment, which he should not otherwise recede from; that it was possible more might be concealed under this solicitude for so long an extension of the excise than they were willing should be discovered:—and here a paragraph occurs, which does indeed make a discovery; and which will be of singular use to the intelligent reader through the whole course of the controversy, viz. "It is well known, that by the laws now in force, the public money is solely in the disposal of the assembly, without the participation of the governor; nevertheless, while these acts, by which money was raised, were of short duration, the governor had now and then an opportunity of obliging the assembly in a very essential manner by a renewal of those acts, and thereby of making himself acceptable to them; but to extend them to such an unreasonable length of time as you now desire, might be to render him in a great measure unnecessary to them during the continuance of those acts, but upon terms very disagreeable to himself, as well as injurious to his constituents: to this condition, therefore, I will not be the means of reducing any successor of mine; and this circumstance is of no small additional weight with me to adhere to my amendment." He then desires them to observe, that the question between them, is not, which is best acquainted with the circumstances of the people? but whether it was reasonable to burden them with an unnecessary tax? assures them, they are exceedingly mistaken, if they really supposed he had either changed his sentiments with respect to the importance of the present occasion for supplies, or that he was less apprehensive of the dangers the province was then exposed to from the invasion of a foreign power than before; makes a merit of having gone farther in his condescensions to please them, than he was warranted to do, by the king's instruction, unless they made an addition to the supply, by extending their currency a year longer than the utmost term allowed to the eastern governments by the late act of parliament; adds, that he well knew the state of their funds, and that the loan-office itself, were the money duly collected, was able to furnish a much larger sum than the sum granted upon this important occasion, independent of the interest hereafter to accrue, &c. That such being the favourable state of their finances, in declining to do what his majesty so justly expected from them, merely because he, the governor, would not wholly depart from his instruction, they became more justly chargeable with a wanton disregard of his majesty's commands, than he could possibly be with the lukewarmness imputed to him, which he had the greatest detestation of: and with a mixture of persuasion and menace, he came to a conclusion as follows, "let me therefore, gentlemen, recommend to your serious attention, a review of your conduct upon the present occasion, and if you shall find that you have been too precipitate in the resolution contained in your message, let me entreat you to rectify it before it be too late; for, as I must be obliged soon to lay this whole transaction before his majesty, it would give me the greatest pleasure that both you and I might receive his gracious approbation of our services. But if, contrary to my hopes, you should still persist in refusing to accept of my amendment, and the bill should by that means be lost, I cannot but apprehend some unhappy consequences to the province from your extraordinary behaviour."

There is, one would think, a magical power in government, capable not only of altering, but even reversing the forms, colours, and essences of things; to common sense it seems evident, that the people give, and the governor refuses to accept; and that the said governor, by avowing proprietary and deputy-government-reasons for such his refusal, avows, that the king's service and the people's safety are but subordinate considerations—but our own eyes are not to be trusted it seems—none of this is so—if the people do not do all that is required of them, and in the manner required, they do nothing; and all the mischiefs that ensue are to be laid at their door.

The assembly were not, however, to be amused by the waving of a government-wand; but on the contrary, having bestowed as much time upon the affair as was necessary for a thorough discussion of it, came to a course of spirited resolutions; of which the most material and perspicuous are those which follow, viz.

"That the raising of money for support of government and other public uses, by an excise on spirituous liquors, hath been practised in this province, with very little intermission, for more than thirty years past, and hath not been found, *communibus annis*, to produce more money than was necessary for those uses.

"That the raising money by such excise,

has by experience been found less burdensome to the people, than the method of poll and pound rates; and hence the load of public expense hath been more cheerfully borne, government more liberally supported, those who serve the public better and more punctually paid, and greater sums given from time to time to the king's use, than could otherwise have well been raised.

"That if the excise act be extended but four years, and the sum of ten thousand pounds is to be sunk thereby in that term, yearly provincial taxes by poll and pound rates (always more grievous to the people) must probably in a short time become necessary, to defray the usual and contingent expenses of the government.

"That if there really were, which is very uncertain, so great a sum outstanding due to the public, as if collected, would be in the disposition of the house, and sufficient to answer the present emergency; yet, to enforce the collection suddenly, by seizing and selling the estates of the delinquent borrowers, in this time of scarcity of money, when so many plantations being offered at once to sale, could not probably find a sufficient number of good purchasers, and must consequently sell for much less than their real value, would be cruel, oppressive, and ruinous to the people.

"That the right of judging and determining, not only of the sum necessary to be raised for any public service, but of the time and manner of raising it, and term for paying it; is solely in the representatives of the people; and that the governors of this province have not, nor ever had, nor can have, any right to interfere therein, under pretence of rectifying mistakes, easing the people, or any other pretence whatever.

"That a just, upright, and prudent administration of government, will always be the best and most effectual means of obtaining and securing the affections of the people; and that it is neither necessary nor expedient to deny the present assembly the exercise of their just rights, that a future governor may have an opportunity of obliging a future assembly by permitting it.

"That an act of parliament made expressly to remedy disorders in the eastern governments, and in which this province is neither named, nor intended, cannot by any construction be supposed binding on the governors or assemblies of Pennsylvania.

"That to refuse a grant of ten thousand pounds to the king's use at this critical juncture, when the service of the crown, and the welfare, present and future, of all the British colonies, seem to the governor so eminently to demand supplies, merely from an opinion in the governor, that he can judge better than the people's representatives what is most for their ease, or that a future governor may have an opportunity of making himself acceptable, appears to this house to be sacrificing too much, to considerations of uncertain and small moment.

"That we have now offered the governor a bill for granting ten thousand pounds to the king's use, to be sunk by extending the excise for ten years, (a bill of the like tenor of that of 1746 [passed by governor Thomas] for granting the sum of five thousand pounds to the king's use, to be sunk by extending the excise for ten years) to which he has been pleased to refuse his assent.

"That as the governor [in his message of the 1st of March last] acknowledged the term of ten years for extending the excise to sink the five thousand pounds, was 'a short space of time,' and that there was not 'the least probability of that act's producing any of the inconveniences complained of;' the same term of ten years for extending the excise to sink ten thousand pounds, must, in consequence, be allowed a 'short space of time:' and, the bill he now refuses being of the same tenor, there cannot be 'the least probability of its producing the inconveniences complained of; the preventing of which for the future appears clearly [to the governor] to have been the sole end and purpose of the royal instruction.'

"That the governor having, as he hoped, [to use his own words] 'incontestably proved, that the true and real intention of the royal instruction could have been no other than to guard against the abuses enumerated in the body of it; and the act for granting five thousand pounds for the king's use, passed by the late governor, in 1746, being of a singular and quite different nature from acts passed upon ordinary occasions, could not be comprehended within the meaning of the said instruction:' the bill now offered to the governor for granting ten thousand pounds for the king's use, being also of a singular and quite different nature from acts passed upon ordinary occasions, and of the same tenor with the act passed in 1746, cannot be comprehended, by the governor, (unless he has very lately altered his opinion) to be within the meaning of the royal instruction; and therefore,

"That it is our opinion, that if the governor is restricted by any instruction from passing this bill, it must be by some instruction which he has never been pleased to lay before this house,—and not the royal instruction, the operation of which, against bills of this tenor, he hath so effectually invalidated.

"That this house will this day adjourn to the nineteenth day of the month called August, next."

Before they adjourned, however, and without any mention made of these resolutions, they addressed the governor by message; in which, having civilly and thankfully observed

the care he had taken, to obtain the best intelligence he was able of what was proposed to be transacted at the ensuing treaty to be held at Albany, &c. they proceeded as follows: "And as he has been pleased to request our sentiments on the instructions to be given the gentlemen commissioners on the part of this province, 'to which he will pay the greatest regard,' we can do no less than return him our grateful acknowledgments for his condescension and justice; and would cheerfully comply therewith at this time: but when we consider, that no propositions for an union of the colonies, in Indian affairs, can effectually answer the good purposes, or be binding farther than they are confirmed by laws enacted under the several governments comprised in that union; that we know not what restrictions the governor may lie under in passing our acts; and that we have very little reason to depend upon any assistance in our Indian expenses, whereby a former assembly, it has been respectfully addressed for, and where we think in justice we have a right to expect it; we are, under these circumstances, at a loss to advise him on the important articles he has been pleased to propose to our consideration. Nevertheless, as we have already declared our satisfaction in the gentlemen the governor has been pleased to name for this commission, so we confide in their abilities and prudence to answer the ends proposed in the letter from the lords of trade, of the eighteenth of September last, by renewing at this interview, the covenant chain with the Six Nations, and by frustrating, as far as lies in their power, any attempts which have been made to withdraw them from the British interest: and for this purpose, in compliance with the said letter from the lords of trade, we have now granted a present to be made to those Indians on our behalf, however inconvenient we may judge it to hold our treaties at Albany on other occasions."

Lastly: the governor also, on his part, desired the members sent with this message to acquaint the house, that as some parts of the minutes of that session might be necessary to be mentioned in the representation, the governor found himself obliged to make to his majesty, in answer to his royal order, in relation to the invasion of his dominions by the French and their Indian allies, he desired the house would order a copy thereof to be delivered to him: and an order was thereupon made, that the said minutes might be delivered to him accordingly.

Their next meeting was on the 7th of August following, by special summons: upon which occasion, the governor, having sent for the house, acquainted them with Washington's defeat, and in the most solemn manner (his words) recommended to them a cheerful and vigorous resolution of dislodging from the neighbourhood of their settlements, [not the settlements themselves, or parts unsettled *far within* the limits of the province, as before confidently asserted from *undoubted assurance*] not indeed as principals, but in concurrence with the government of Virginia, when the determinations taken there should be communicated to them—urging, that in the mean while it would be highly expedient to take into consideration the most proper ways and means of raising a supply for this service; and that in doing thereof, they should industriously avoid whatever might be likely to occasion any difference of opinion between him and them, to the detriment of the common cause, &c. That some provision should be made for the support of such Indians as, flying from the enemy, had taken refuge amongst their brethren of Pennsylvania; that the inhabitants on the frontiers, had also by their petitions applied to him for protection; that the defenceless state of the province in general, demanded their special consideration: that it was become his indispensable duty to press it upon them accordingly, &c. And in the close of all he expressed himself as follows:

"It is with great satisfaction, that I now communicate to you the proceedings of the commissioners at the late treaty at Albany; as, on perusal thereof, you will clearly perceive, that the lands on the river Ohio do yet belong to the Indians of the Six Nations, and have, long since, been by them put under the protection of the crown of England. That the proceedings of the French in erecting forts on that river, and in the countries adjacent, have never received the countenance or approbation of those nations; but, on the contrary, are expressly declared by them, to have been without their privity or consent. That they are greatly alarmed at the rapid progress of the French, and in severe terms reproach us with supine negligence, and the defenceless state of our possessions; and, in effect, call upon us to fortify our frontiers, as well for the security of their countries as of our own.—That after a due and weighty reflection on these several matters, with many others of equal importance, the commissioners thought it necessary to consider of, and draw up a representation of the present state of the colonies: and from thence, judging that no effectual opposition was like to be made to the destructive measures of the French, but by an union of them all for their mutual defence, devised likewise a general plan for that purpose, to be offered to the consideration of their respective legislatures.

"And as both those papers appear to me to contain matters of the utmost consequence to the welfare of the colonies in general, and to have been digested and drawn up with great

clearness and strength of judgment, I cannot but express my approbation of them; and do therefore recommend them to you, as well worthy of your closest and most serious attention."

The particulars contained in this speech were also enforced by several papers communicated at the same time: and the house taking the premises into consideration, after various debates, divisions, rejections, &c. agreed to a bill for striking the sum of thirty-five thousand pounds in bills of credit, and for granting fifteen thousand pounds thereof for the king's use, and for applying the remainder to the exchange of torn and ragged bills: which, being presented to the governor, produced the following answer, viz.

"The governor promised himself, from the request he made to the house in his speech at the opening of the session, that (considering the importance of the occasion) they would have fallen upon some method of raising money for the king's use to which he might have had no material objection; and could not help therefore being extremely mortified at finding the bill now presented him for that purpose, to be not only formed on the said plan, but to be nearly of the same tenor with that to which he refused his assent at their last meeting. He has nevertheless complied with the proffer he then made them, and has agreed to extend the fund they have chosen to raise the money upon, in the same proportion as they have increased the sum granted to his majesty. But the house is peremptory, and will admit of no alteration in their bill. All then that remains after assuring them that the governor, lest the king's services should suffer, has strained his powers even beyond what he almost dares think consistent with his safety, is, to submit our respective conduct to the judgment of our superiors. But he hopes this also may be rendered unnecessary by the arrival of the gentlemen that is to succeed him in the administration, who may every day be looked for among us: and who may possibly think himself more at liberty with respect to the matter in controversy, than the governor can presume to do. In the mean while it is hoped no considerable detriment may arise to his majesty's affairs in the short interval between this and the time of his actual arrival.

"So much has already been said upon this subject on another occasion, that the governor declines any farther enlargement thereon, as well knowing that public disputes of this nature frequently terminate in private animosities, which he is very desirous of avoiding; and therefore only expects from the house that they will do him the same justice he is willing to do them, in supposing him to act from his judgment, when he tells them that he cannot recede from his amendments."

This was the last act of Mr. Hamilton's government. Weary of a service, which he found incompatible, if not with his notions of honour, at least with his repose, he had desired to be dismissed; and was succeeded by Robert Hunter Morris, Esq.

In the beginning of October, 1754, much about the time of Mr. Morris's arrival at Philadelphia, a new assembly was to be chosen in the course of the year, and had been chosen accordingly.

To these summoned, according to form, up to his council-chamber, the new governor made a short speech; importing, "his persuasion that the proprietaries had nothing more at heart than the welfare and prosperity of the people: his own self-flattery that it was from the opinion that they had entertained of his disposition to promote the general happiness to the utmost of his power, they had made choice of him: the resolution he had taken not to disappoint them: assurance, that he should, upon all occasions, be studious to protect the people committed to his charge in their civil and religious privileges, and careful to maintain the just rights of government, as equally conducive to the public good: a recommendation, in particular, of the state of the frontier both of that and the neighbouring governments; where they would find the French acting with a steady uniformity and avowed resolution to make themselves masters of the country; an interspersion of certain stimulatives, drawn from a contemplation of the miseries they would be exposed to, in case they suffered the enemy to strengthen themselves in their posts; and an earnest call upon them, in his majesty's name, to exert themselves at that critical juncture in defence of their country. And lastly, a declaration, that if they should find any laws wanting for the better government of the province, he should be ready to enter upon the consideration of such as they should propose, and give his consent to such as he should think reasonable."

More doubts than confidence, it may be presumed, this speech excited; for the assembly having, upon the report, bestowed some time in the consideration of it, thought fit to call for a copy of the governor's commission, as also of the royal approbation, before they proceeded to answer it.

This answer was also as dry, and as cautiously worded, as the governor's speech. They echoed back what parts of it they could; and they joined issue with the governor in promising with the same sincerity, to contribute every thing in their power to support him in the exertion of the just rights of government, conducive to the good ends by him specified. After which they proceeded in these words: "the encroachments of the French on his majesty's territories, and their hostile proceedings in this time of peace, are truly alarming; and

as they have been long since known in Great Britain, we were in hopes, on the governor's arrival, to have received instructions from the crown how to conduct ourselves on this important occasion: but as we have not had any such laid before us, the royal order sent to the several colonies by the earl of Holdernesse, in his letter of the twenty-eighth of August, 1753, appears to be the only rule by which we can now act with safety. And as we find our late assembly did what was most consistent with the trust reposed in them, to comply therewith, the governor may likewise depend upon our doing whatever can be reasonably expected from us for the good of this province, or the general interest of the British colonies on the continent, whenever our assistance can be applied to any valuable purpose. But at present, as we know not where to direct our aid, and as this has not been the usual time of doing business, occasioned by the governor's being obliged to give his attendance elsewhere, we are inclined, if he has no objection, or any thing farther to lay before us, to make a short adjournment; and if, during our recess, any matters of importance should come to his knowledge, we shall cheerfully attend the governor's call of our house, and contribute our assistance for the public good."

The result was, that the governor thanked them for their speech, and concurred in their proposition; upon which they adjourned accordingly.

In the beginning of December they met again, and then the governor communicated a letter from sir Thomas Robinson, secretary of state, dated July 5, 1754; by which it appears, that for upwards of ten months, the case of the northern colonies, actually invaded by the French, had not been made the foremost point of consideration here at home; and that the Americans were in a sort of disgrace at court for not having broken through all the cautions laid upon them before, and assumed and exercised all the powers of government in taking care of themselves.

Let the reader judge for himself.

"WHITEHALL, July 5, 1754.

"SIR,—Your letter of the 25th of November last, in answer to the earl of Holdernesse's of the 28th of August, having been received and laid before the king, I am to acquaint you, that it is his majesty's express command, that you should, in obedience thereto, not only act vigorously in the defence of the government under your care, but that you should likewise be aiding and assisting his majesty's other American colonies, to repel any attempts made against them; and it was with great surprise, that the king observed your total silence upon that part of his majesty's orders, which relate to a concert with the other colonies, which, you must be sensible, is now become more essentially necessary for their common defence, since the account received by you from major Washington, with regard to the hostilities committed by the French upon the river Ohio, which verify in fact what was apprehended when the earl of Holdernesse wrote so fully to you in August last, and which might have been, in great measure, if not totally prevented, had every one of his majesty's governments exerted themselves according to those directions, the observance whereof I am now, by the king's command, to enforce to you in the strongest manner.—I am, &c."

The governor also accompanied this letter with a speech, in which occur the following curious particulars, viz.

"From the letters and intelligence I have ordered to be laid before you, it will appear that the French have now, at their fort at Monongatula, above a thousand regular troops, besides Indians; that they are well supplied with provisions, and that they have lately received an additional number of cannon; that their upper forts are also well garrisoned and provided; and that they are making a settlement of three hundred families in the country of the Twigtwees, at the south-west end of the lake Erie.

"From those papers you will likewise be informed of the use they have made of their last year's success among the Indians of the Six Nations, having prevailed with many of them to remove to Canada, who will either be neuter in the present dispute, or take up arms against us, while such few of the Indians, as still retain their attachment to the English, dare not be active for us, till they see a force in the field superior to that of the French; and if that be not soon, they will certainly give up our cause, and embrace the tempting offers made them by the French.

"Gentlemen, it is now several years since the French undertook this expedition, and we have long had full intelligence of their designs, and of the steps they have taken to carry them into execution: their progress indeed has been very surprising, owing chiefly to the inactivity of the English colonies, who, I am sorry to say, have looked with too much indifference upon an affair that must end in their ruin if not timely prevented."

[Poor colonies! exposed on one hand! censured on the other!]

In a subsequent paragraph he also proceeds as follows:

"These encroachments of the French upon the territories of the crown of Britain in America, have turned the eyes of Europe to this quarter of the world, as it is uncertain what effects they may produce. The conduct therefore, of these colonies, will be more than ever the object of their attention, and ours in particular who are most immediately concerned: for whether the French forts are within

the particular limits of this province or not, I look upon to be very immaterial in the present case, though in my opinion they are clearly so: but be that as it may, our situation at present is certainly very alarming: the French on our borders are numerous, strongly fortified, well provided, and daily increasing; the small body of English troops on the frontiers, weakened by desertion from the independent companies, and the want of discipline in the new levies; the Six Nations of Indians, formerly our firm friends, divided among themselves, many of them gone over to the French, and others wavering and in doubt whether to follow their brethren, or continue with us; the neighbouring provinces (except Virginia) though nearly interested in the issue of the present affair, either contributing nothing towards the common cause, or sparingly: and though Virginia has indeed given thirty thousand pounds, yet it will avail but little, unless a considerable body of troops be sent from this province, and kept up till the work is done.

"Permit me, therefore, gentlemen, to press this matter upon you: exert yourselves upon the present occasion; dissipate the cloud that hangs over your country, and save her from the threatened destruction. His majesty, ever anxious for the welfare of all his subjects, excites and commands us; the eyes of a British parliament, of the people of our mother country, of the other American colonies; and even of all Europe, are upon us; and the fate of this country, the happiness or misery of your posterity, very much depend on your resolutions."

Thus Pennsylvania alone must be put in the front of the battle, must undertake for all, pay for all, &c. and is goaded on so to do by the very proprietaries and their deputy, who should have stood in the gap, and endeared themselves to the province, by endeavouring to have the load laid as equally on the whole continent, and the effort made as generally as possible.

It is visible, the governor's name signified nothing, whether Hamilton or Morris, except that the hardest driver was sure to be the best thought of by his employers: and it was but natural, that the assembly should be as resolute to continue the province in such a state as might render it worth preserving, as they were willing to contribute whatsoever they properly could towards its preservation.—Pennsylvania was more dear to them for the excellency of its constitution, than the excellency of its soil; and whatever the narrow notions of proprietaries may be, as the liberty of the province is diminished, the value of their possessions in it will diminish in the same proportion.

To discharge all duties at once, therefore, they again put the demands for the general service, and those for the particular interest of the province, upon the same footing. by the old expedient of a currency bill, providing for striking the sum of forty thousand pounds in bills of credit; one moiety for the king's use, and the other for replacing damaged bills: which they sent up to the governor for his concurrence, with a written message, of which what follows was the most material part.

"Though we hope the number of the French, and their Indian allies, mentioned in George Croghan's letters are full large, yet the uncommon efforts they have made towards obtaining a possession on that part of his majesty's dominions, are truly alarming, and dangerous to the British interest in North America: and we have good reason to believe, the sums granted the king by our late assembly, had the then governor been pleased to pass the bills offered to him for that purpose, 'might in a great measure, if not totally, have prevented the bad situation of our affairs at present,' and have placed our duty to the best of kings, as we desire it should always appear, among his most loving and loyal subjects. And for this reason, it is with concern we find, by the above mentioned letter from the secretary of state, 'That it was with great surprise the king had observed, in our late governor's answer to the earl of Holdernesse, he had been totally silent on that part of his majesty's orders, which relate to a concert with the other colonies.' But as we have great confidence in our governor, that he will at all times afford us all good offices and protection, and will be pleased to represent us and our affairs in a favourable light, as we hope he may do with great justice; so, on our part, we shall not fail to contribute every thing in our power to answer all reasonable expectations from so young a colony, so far as is consistent with our civil and religious liberties; beyond which, under so good a king, we are well assured nothing further will be asked or expected from us: and, in return for the governor's justice and protection, it will give us particular pleasure to make his administration in this province easy to himself, and honourable to all."

Amazing was the answer by the governor, on the sixth day afterwards returned: for having, at his very outset, taken shelter under the old exploded instruction to governor Thomas, and Ryder the attorney-general's opinion upon governor Hamilton's case, delivered in the following compendious manner: "I am of opinion, it is by no means safe or adviseable, or consistent with his duty, to pass such bills, without a suspending clause;" and suggested, that he could not by any means agree to the said bill, because forbid by the said instruction, without such a clause. He then proceeded to say, "however, as the act of parliament restraining the four eastern go-

vernments from emitting paper-currency, gives them a power to strike bills of credit in case of emergency, I hope I shall be justified in thinking the reason holds good as to us who are in the greatest danger, being already invaded by the French, and in immediate expectation of outrage from the Indians in their alliance: I will therefore join with you in any bill for striking what sum you shall think our pressing occasions demand, provided a fund be established for sinking the same in five years.

"I am exceedingly obliged to the house for their kind sentiments with regard to me, and shall make it my peculiar care so to act as to merit the continuance of their good opinion; and can truly say it is no small mortification to me to be obliged to differ in opinion from the representatives of the province, who, I am convinced, act from upright motives, and what they esteem to be its true interest; but would willingly hope, when they come to reflect on the obligations I am under to pay obedience to his majesty's instructions, that they will not press me to disobey them; especially when they consider, that, should I disregard my own honour and safety in passing a bill circumstanced as this is, there is great danger of its being disapproved by his majesty; and what loss and confusion such an event would cause in the province, by the paper-bills becoming of no value, I need not particularly mention."

From the year 1740, down to the time of this altercation, his majesty's ministers had never once interfered in this dispute; nor in these requisitions from the secretary's office, in the king's name, of aids from his American subjects, is the least trespass on the right of the subject, by any injunction direct or indirect concerning the mode of raising these aids, to be traced: and yet this petty proprietary governor dares to make a bugbear of his majesty's disapprobation, at the same time, and in the same breath that he leaves a gap for dispensing with the very instruction he pleads, provided the proprietary turn is served, of reducing the term to five years.

It is moreover reasonable to think the governor had in his hands at this very time a third letter from the secretary of state, now sir Thomas Robinson, dated October 26, 1754: for on the very next day after this message was delivered, he sent down a copy of the said letter to the house, accompanied with another written message so timid and constructed, as to render it as embarrassing as possible.

This third letter imported, that the ministers had at last come to a resolution of taking some measures of their own for the defence of America. Amongst others it was said, the king had commanded two regiments of foot, consisting of five hundred men each, to repair to Virginia, there to be completed to seven hundred; as also to send orders to governor Shirley and sir William Pepperell, to raise two regiments of one thousand men each; for which officers were to be appointed, and to repair to America forthwith; all to be commanded in chief by a general officer of rank and capacity, accompanied by a deputy-quarter-master-general, and a commissary of the musters, who were likewise to set out as soon as conveniently might be, in order to prepare every thing for the arrival of the regiments to be sent, and those to be raised. What follows is in the very words of the letter, viz.

"You will receive from that general, and the other officers just mentioned, a full and exact account of the arms, clothing, and other necessaries, to be sent upon this important occasion; as likewise of the ordnance stores, and of the officers and attendants belonging thereto: all which being ordered for this service, are such proofs of his majesty's regard for the security and welfare of his subjects in those parts, as cannot fail to excite you to exert yourself, and those under your care, to take the most vigorous steps to repel your common danger; and to show that the king's orders, which were sent you last year by the earl of Holdernesse, and were renewed to you in my letter of the 5th of July, have at last roused that emulation and spirit which every man owes at this time, to his majesty, the public, and himself. The king will not therefore imagine, that either you, or the rest of his governors, will suffer the least neglect or delay in the performance of the present service, now strongly recommended to you, particularly with regard to the following points, viz. That you should carefully provide a sufficient quantity of fresh victuals, at the expense of your government, to be ready for the use of the troops, at their arrival. That you should likewise furnish the officers, who may have occasion to go from place to place, with all necessaries for travelling by land, in case there are no means of going by sea; and that you should use your utmost diligence and authority in procuring an exact observance of such orders as shall be issued from time to time, by the commander in chief, for quartering the troops, impressing carriages, and providing all necessaries for such forces as shall arrive, or be raised within your government.

"As the articles above-mentioned are of a local and peculiar nature, and arising entirely within your government, it is almost needless for me to acquaint you, that his majesty will expect, that the charge thereof be defrayed by his subjects belonging to the same. But with regard to such other articles, which are of a more general concern, it is the king's pleasure, that the same should be supplied by a common fund, to be established for the benefit of all the colonies collectively in North

America; for which purpose you will use your utmost endeavours to induce the assembly of your province to raise, forthwith, as large a sum as can be afforded, as their contribution to this common fund, to be employed, provisionally, for the general service of North America, particularly for paying the charge of levying the troops to make up the complement of the regiments above-mentioned, until such time as a plan of general union of his majesty's northern colonies, for their common defence, can be perfected.

"You will carefully confer, or correspond, as you shall have opportunities, upon every thing relative to the present service, with the said general, sir William Pepperell, and governor Shirley, or either of them; and as it is the king's intention to give all proper encouragement to such persons who shall engage to serve upon this occasion, you will acquaint all such persons, in the king's name, that they will receive arms and clothing from hence, and that they shall be sent back, if desired, to their respective habitations, when the service in America shall be over.

"As the several governors in all the king's provinces and colonies in North America will receive, by this conveyance, a letter to the same effect with this which I now send you, they will be prepared at the same time to obey his majesty's commands.—And I am to direct you to correspond with all, or either of them, occasionally, as you shall find it expedient for the general service."

It is plain by the general drift of this letter, that it related equally to every governor and every government of North America: and yet the governor of Pennsylvania did his best to narrow the application of it to Pennsylvania only. These are his words: "you will observe by the secretary of state's letter, that it is his majesty's pleasure we should contribute as far as we can to the having about three thousand men in readiness to enlist; that we should provide a quantity of fresh provisions for the troops, and necessaries for the officers that may have occasion to travel by land; that the orders to be issued by the commander in chief for quartering the soldiers, and impressing carriages, should be carried into exact execution; and that all necessaries should be provided for such troops as shall arrive or be raised within this government.—His majesty expects, that as the several articles, abovementioned, are of a local and peculiar nature, and arising entirely within this government, that the charge thereof should be defrayed by his subjects within the same."

To both these messages the assembly immediately applied themselves, to prepare suitable answers; and, beginning with the first, among other things said, "We have the misfortune to differ in opinion from the governor, after considering the case maturely as it now lies before us; nevertheless, we do assure him, that though in a matter of small importance we might not, perhaps, be very tenacious of our own sentiments; yet, in this case, our all is concerned, and if we should not act becoming the rights our birth, as Englishmen, entitles us to, we might appear unworthy of the regard we have already experienced, and have good reason to hope for hereafter, from a British parliament."

"It appears that the case, as stated to the attorney-general, regards only emissions of bills of credit on common and ordinary occasions; and, in our opinion, very little, if it all, affects the present bill: and it is remarkable, that there is not the least notice taken of the act for granting five thousand pounds for the king's use, which governor Thomas passed without a suspending clause, by extending this very excise act for ten years, which we have now again extended for the same term of years only, and loaded it with a grant of twenty thousand pounds.

"As colonel Thomas gave his assent to that act after the receipt of the additional instruction, which the governor has now sent down with our bill, and as we presume he has no other or later instructions from the crown, though he has since received the royal approbation, we hope he will not think himself more restricted by it, than the gentleman to whom it was immediately directed; who has never suffered in his honour, that we know of, or incurred the king's displeasure for giving his assent to that bill, and at this time holds a government of great importance under the immediate powers of the crown.

"Governor Hamilton, we find, entered into bonds and penalties (among other things) that he shall from time to time, and all times, hereafter, so long as he shall continue lieutenant-governor of the said province, observe, perform, and obey all such directions and instructions, which now are, or shall at any time be given, or sent to him, by his majesty, his heirs, and successors, or from any person or persons, now acting, or that hereafter shall act, by authority from his majesty, his heirs and successors, and pursuant to, and for the putting in execution the several acts of trade and navigation, relating to the plantations, &c. which bond, or bonds of the like tenor, we presume our governor may have entered into before he received the royal approbation: and yet our late governor seems clearly in his reasoning with former assemblies, to have acknowledged he thought himself at liberty to pass acts of the tenor of our present bill for granting money for the king's use; and never offered a suspending clause, notwithstanding his bonds to the crown; but whether he might, or might not, be safe in passing a bill of the kind mentioned in his state of the case, could regard himself only, and does, by no means,

determine the rights we claim under the royal charter. And we have the pleasure to assure the governor, we have been credibly informed that the board of trade, about a year ago, stated a question to the attorney and solicitor-general, with respect to the validity of this instruction of a suspending clause, over governments claiming particular rights by charter; to which they have not yet given any answer, that we can learn. And we know, that notwithstanding two bills extending the royal instructions over councils and assemblies in America had been attempted in parliament without success, and a third bill was brought in with the same clause, yet it could not obtain a passage there. And we are informed, that a noble friend to liberty and the rights of the British subject, a member of that house, exposed this third attempt so fully, upon the second reading of the bill, that the clauses on this head objected to were dropt without a division in the committee. And until such acts of parliament shall be obtained, which we have good reason to hope will never be imposed upon us, the governor must agree with us, that it is our duty to defend the rights and privileges we enjoy under the royal charter.

"As in the present case, we are not bound by any acts of parliament, and are certainly clear of the act limiting the eastern colonies, both as to the force and the intention of it, we hope the governor, from his known abilities and good will to the prosperity of this province, will immediately discern the difference between this bill and acts of assembly creating bills of credit on common and ordinary occasions. What force royal instructions may have on bills of credit passed on common and ordinary occasions is not immediately before us, and may be considered at a proper time. But we hope the governor, notwithstanding any penal bond he may have entered into, will, on reflection, think himself at a liberty, and find it consistent with his safety and honour, to give his assent to this bill, which may, at this time, be of such great service to the British interest in America.

"But if we should unhappily still differ in opinion, notwithstanding these reasons, and such as have been offered by our former assemblies, we must be obliged, as our last resource, to apply to the crown for redress, or to the lords of trade, or our proprietaries, as the case may require; in which, we doubt not, the governor will favour us with his assistance. And in order to furnish ourselves with every thing necessary for our own vindication, and that this case may appear in its full light, we entreat the governor will be pleased to inform us, whether the royal instruction is the only impediment; or whether he has any farther instructions from our proprietaries, which influence him in refusing his assent to our bill? and, if he has, that he would be pleased to lay those instructions before us for our consideration."

And the answer to the second was as follows:

"The undoubted proofs his majesty has ever given of his gracious and paternal affection for all his subjects, however distant from his royal presence, and the fresh marks we have now before us of his care and regard for the welfare and security of his subjects in North America, excite in us the warmest returns of duty and gratitude; and we hope we have fully testified, that we have nothing more at heart, in all our deliberations, than to answer the reasonable expectations of the crown from this young but loyal colony. We have cheerfully passed a bill for granting twenty thousand pounds for the king's use, which now lies before the governor for his approbation, and we hope will answer all the purposes recommended to his care by sir Thomas Robinson's letter of the 26th of October last."

It was now the governor's turn; and the reader must recollect his former declarations, in order to wonder enough at his introductory paragraph, which was as follows:

"Gentlemen, when your bill for striking twenty thousand pounds, &c. was before me, I duly considered the dangerous circumstances in which the province was involved; and the absolute necessity of speedy measures to remove the French from their encroachments, and this induced me, instead of adding a cause to suspend the force of the act till his majesty's pleasures could be known, to send it back to you, that you might frame such a one as I was at liberty to give my consent to; and at the same time to signify to you, that I would agree to the striking any sum the present emergency might require, provided funds were established for sinking the same in five years, that being the term prescribed by an act of parliament for regulating paper-money in the eastern governments; and I thought the reason of that act extended here, though the force of it did not; and I hoped that I should be excused, if I so far relaxed the instruction upon the present occasion, as to act agreeable to the rule laid down by parliament for the neighbouring governments, and I am sorry, for the sake of the public, to find by your message, that you have so far misapprehended me, as to conceive that I intended to insist on the suspending clause in this dangerous situation of affairs, which the words of my message do in no wise import, and that upon the whole, you refuse to accede to the reasonable measures I proposed."—Proceeding then to Ryder's opinion; he would not allow, it regarded only common and ordinary emissions: said, that if governor Thomas was never censured for dispensing with the instruction, it

was because the transaction itself had never been made known to his majesty or his ministers; that the fact mentioned by them, relating to the case laid by the lords of trade before the attorney and solicitor-general, was quite unknown to him; that, however, when they should report their opinion, and his majesty should think fit to issue different instructions, he should endeavour to pay the proper obedience; that the debates in parliament, &c. had little connexion with the matter then before them; that though the parliament did not agree to give a general sanction to all instructions from his majesty, yet the instruction in question having been the result of addresses from both houses, it could not be doubted but they would support their own act; that he joined with them in opinion, that the only method to have the validity and force of the same finally determined would be by an application to his majesty, and was desirous they should lay the whole affair before his majesty's ministers; that being, as he was, in a great measure, a stranger to their constitution, the proprietaries' instructions were quite necessary to him; that those he had received from them, were so perfectly calculated to promote and secure the happiness of the province, and so reasonable in themselves, that they required nothing of him, but what he should have thought it his duty to do without them: that though he did not think it quite decent, and he believed unprecedented, for a governor to be called upon for a sight of his instructions, he would nevertheless communicate them to the house whenever the public service should require it; that, accordingly, he took that opportunity to acquaint them, that he had it in charge from the proprietaries, to recommend to them, in the most pressing manner, to provide with all imaginable despatch for the defence and safety of the province, not only by affording such aids as his majesty from time to time should require, but by establishing a regular militia, providing arms and stores of war, and building proper magazines; all to be done in such a manner as to be least burdensome to the inhabitants, and particularly so, as not to oblige any to bear arms who were or might be conscientiously scrupulous against it; that he required this, in pursuance of the proprietaries' instructions; and that he was the more urgent in it, because the province never had been in more imminent danger than it was at that time: that being to give true and exact accounts of the state of the province to his majesty and his ministers, as well as to the proprietaries, he desired a clear and determinate answer to this point, that he might be able to lay the same before his majesty in such a manner as might make the interposition of parliament unnecessary; that he was really concerned to find, that instead of providing for the articles recommended to them by his majesty, in a manner agreeable to his royal directions [it has been already observed, that no manner had been, or could be, with propriety, directed by the king] they insisted on his passing the bill, in the shape they had sent it up, though before informed he could not do it; that he then again assured them, he would not assent to that or any other bill for emitting paper-money, but upon the terms above-mentioned; he also took occasion to add, among other things, that this dispute so long depending, might certainly have received his majesty's determination long ago, had they applied for it—[which, by the way, might have been retorted with equal truth on the proprietaries]—That, were there no other method of raising money for the present service, but that by them proposed and insisted upon, their conduct might have appeared in a more favourable light; but that as they had, or ought to have had in bank, by the laws in being, fourteen or fifteen thousands pounds, together with a revenue of seven thousand pounds a year; as the city and province were in rich and flourishing circumstances, the people numerous, and burdened with none or very trifling taxes, he could not consent to pass the bill proposed; it being (said he) a direct breach of a royal instruction intended to enforce an act of parliament of the sixth of queen Anne, which [whether act or instructions is doubtful] they knew had been shamefully slighted and disregarded in this and the neighbouring provinces. "Upon the whole," continued he, "you will consider, gentlemen, in what light you will appear to his majesty and a British parliament, who are expending great sums of money for the defence of these colonies, while you, the very province most concerned as being invaded, instead of contributing towards your own defence, are entering into an ill-timed controversy concerning the validity of royal instructions, which might have been determined long ago, and may be delayed to a more convenient time, without any the least injury to the rights of the people. Let me, therefore, gentlemen, once more recommend the present unhappy circumstances of this country to your most serious consideration; and entreat you to lay aside (for the present at least) every thing that may admit of any dispute, and enter heartily into such measures as may best answer the public expectations, and assist his majesty in the measures he has concerted, and is carrying into execution, for the preservation of this country."

The assembly again, as if to give the governor time for second thoughts, sent him up the reply that follows.

"Before we enter upon the consideration of the other parts of the governor's message of the 24th instant, we must acknowledge ourselves engaged to return him our hearty

thanks for informing us, that, 'as he was in a great measure a stranger to our constitution, and, to be so highly intrusted by the proprietaries, it seemed quite necessary he should receive instructions from them.—And notwithstanding he may think it not quite decent, or may believe it unprecedented, for a governor to be called upon for a sight of his instructions, yet he will communicate them to the house whenever the public service shall require it.'—In return to this candid declaration, and the assurance he is pleased to give us, as well as the ready furnishing us with other parts of those instructions, we beg leave to inform the governor, that we not only apprehend it the undoubted right of a British parliament to address the crown for such information as they judge absolutely necessary to their deliberations; but also, that the proprietary instructions to our former governors, have been repeatedly laid before the assemblies of this province."

Here certain instances were recited; and the sequel was in these words: "We, therefore, under these considerations, and for that we are of opinion those proprietary instructions, which the governor is pleased to inform us our proprietaries gave him on their appointing and intrusting him with this government, are the principal, if not the sole, obstructions to the passing our bill for granting twenty thousand pounds for the king's use; and also, for that whatever bills we might prepare for this, or any other purpose, after all the expense to the country, and after all our pains in framing them, would be liable to the same difficulties, unless we could know what those proprietary instructions are. We say, under these considerations, and from the regard our governor is pleased to express for our charter, and our liberties, we earnestly request he would now candidly communicate those instructions to us, as the time when 'the public service requires it,' in the most particular manner; for, as we are now under an absolute necessity of addressing the crown, in support of our civil and religious liberties, in which we have the pleasure of the governor's concurrence, and indeed his desire that we should apply to his majesty on this occasion, we must, in justice to ourselves, and in discharge of the duty we owe to those we represent, make those proprietary instructions, and the force and validity of them, the great end of our humble petition to the crown at this time, unless the governor shall be pleased to convince us to the contrary."

It was not till the fourth day after this message was presented, that the governor rejoined: during which interval the business of the session seems to have been wholly at a stand; and the language he then used was to the following effect: "That though the house of commons had a right to address the crown for information, and former governors had occasionally laid particular instructions before the assemblies, he did not think assemblies had a right to have them all laid before them upon demand; and was still of opinion, that their application for that purpose was irregular and unprecedented; that it was true he had proprietary instructions as all other governors had had; but that he [who it seems was to be the only judge] could not think it then for his majesty's service, or the interest of the province, to communicate them farther than he had already done; especially as they claimed it as a right, and seemed industriously to seek fresh matter of dispute about them, when the public service required they should be otherwise employed, when they expressed so great a dislike to them, and when they had avowed a purpose of making the force and validity of them, the great end of their petition to the crown, and all this without so much as knowing, except in what related to a militia, &c. what those instructions were; that, having assigned the royal instruction, and the attorney-general's opinion upon it, as his reasons for not agreeing to their bill for striking forty thousand pounds, he should be glad to know upon what information they had given it as their opinion, that proprietary instructions had been the principal if not the sole directors of his conduct, or had become so intimately acquainted with his private sentiments, as to know, that when he said one thing he meant another; that he had been, and still was, desirous, they should apply to the crown for a determination of the dispute between them; but that as he did not know the civil or religious liberties of the people were invaded by the instruction which gave rise to it, he could have no intention to consent to an application in support of them; that an invasion of the civil and religious liberty of a people, was to be reckoned among the worst of crimes, and was then most aggravated when committed by those who were bound both by their oaths and their duty, to preserve those blessings, and protect the people in the enjoyment of them; that his sacred majesty, who had so long and so happily governed his people upon constitutional principles only, disdained a thought of doing or approving any thing that was otherwise; that a British parliament would never esteem a royal instruction, issued at their own request, and intended to enforce a good and wholesome law, in the least destructive of the civil and religious liberties of any part of his majesty's subjects, whatever they, the representatives of Pennsylvania, might do; that it gave him particular concern, that they should purposely enter into a dispute about that instruction, and choose to publish such sentiments of his majesty's government, at a time like that, when a French army were fortify-

ing themselves in their country; that he earnestly recommended to them to consider, whether such expressions might not have a tendency to alienate the affections of the people from his majesty's person and government, and thereby greatly obstruct the measures he was taking at a vast expense, for the preservation and protection of his subjects on that continent; that he had lately received intelligence that six thousand of the best troops of France were actually arrived at the lower fort on the Ohio, and were there employed in fortifying the country; that this ought to convince them, France had formed some grand design on that continent, and that as they had made their first attack upon Pennsylvania, as the most plentiful and most defenceless part of his majesty's dominions, so in a particular manner, it behoved them to exert themselves accordingly; and that he must, therefore, entreat them once more, to waive all disputes till a more favourable season, to consider seriously the dangers their country was exposed to, and not only grant the supplies required, but enable him to raise a considerable body of men, to be employed in conjunction with his majesty's troops, establish a regular militia, provide the necessary stores of war, &c. that the province, for want of discipline, might no longer be left an easy prey to a much weaker body of men, than were then encamped within a few days of this city."

How grossly uncandid and clumsily crafty this rhapsody was, appears at the first glance; and its operation could not but be suitable to its contents.

In short, the assembly, upon the second reading of this and his former message, observing, that the governor called upon them to show, upon what information they founded their opinion, that he was restrained by proprietary instructions from passing their bill, had recourse to their former proceedings in relation to the proprietaries bearing a proportionable part of the expenses incurred on Indian affairs; and the whole having been read and duly considered, upon the issue made the following order, to wit:

"That the representation from the assembly to the proprietaries in 1751, the proprietaries answer thereto laid before the house in May, 1753, and the report of a committee of assembly at that time on the said answer (neither of which have as yet been made public) be now printed with the minutes of this sitting."—And they were printed accordingly.—So that the whole province had now for the first time the whole case before their eyes, and could not help being convinced by these emphatical words, in clause fourteen, of the proprietary answer, before pointed out, "especially if we shall be induced, from the state of your trade, to consent to an increase of your paper-currency," that proprietary, not royal instructions, were indeed the only obstacle to the public service.

But we anticipate—the assembly did not stop here; but unanimously came to such resolutions, and grafted such an address upon them, as, notwithstanding some few inaccuracies, must ever do as much honour to their understandings as justice to their cause, and the noble principles it was founded upon.

With reference to the conduct of their predecessors in former assemblies, and the success of their honest endeavours for continuing to them the invaluable blessings they enjoyed under their charters, derived from the royal clemency and goodness, and the justice and benevolence of their founder, they set out; and declared themselves sufficiently animated by their examples to pursue faithfully the same path which they had trod before them.

Having then glanced at the governor's evasion of his promise concerning his proprietary instructions, and the papers which had passed between the proprietaries and the assembly, as the ground of their proceedings, they inserted the unanimous resolutions they had come to, which were as follow, viz.

"That it is the opinion of this house, that the late governor, who was, we presume, as much bound by the additional instruction to col. Thomas, in 1740, as our present governor is or can be, has clearly admitted in his reasonings with our last assembly, 'that it was an absurdity too glaring, to suppose that any government would voluntarily tie up the hands of its subjects from serving it by such means as they are able, in cases of great emergency;' and that col. Thomas, in passing the act for granting five thousand pounds, for the king's use, in the year 1746, by extending the excise act for ten years, was so far from acting contrary to the instruction he had received from the lords justices in 1740, that the very contrary was evident;' and that the said instruction was not binding upon him from passing a bill in cases of great emergency, of the same tenor with our bill for granting twenty thousand pounds, for the king's use, which our governor has now been pleased to refuse his assent to.

"That it is the opinion of this house, that the governor is undoubtedly bound by proprietary instructions, and that they may be, and we believe they really are, or some of them are, such as, independent of the royal instruction, limit or restrain him from passing acts, which, by the royal and provincial charters, we have an undoubted right to offer, and by which he has, or ought to have, full powers to give his assent to, as governor of this province.

"That it is the opinion of this house, that these proprietary instructions, or some one or more of them, is, or are, the principal, if not

the sole, obstruction to the passing our bill for granting twenty thousand pounds for the king's use, in this time of imminent danger to the British interest in North America."—Adding, "May it please the governor, these resolutions, which are forced from us, we have entered into with the utmost reluctancy; and, in support of them, or any other part of our present conduct, we conceive it our indispensable duty to conduct ourselves precisely within the bounds of sincerity and sober reason, and to avoid every thing that is not in our opinion necessary to our own just vindication."

Yet more to manifest their ingenuity, they declared, in the next place, their readiness to retract the whole or any part of these resolves, on being convinced by a sight of the governor's proprietary instructions, which it was still in his power to communicate, that they had entertained a wrong opinion of them; but then, till that should be the case, they presumed the governor himself could not but allow, that they had good reason to say, they were under a necessity of making their humble application to the crown in support of their civil and religious liberties; and to think, as it was most natural they should, that, if this could have been done, it would have been done; as also, that the governor, at their request, would have concurred with them in an address to the proprietaries in support of their charter, as it regarded the royal instructions only; and that, on the contrary, as circumstances were, their apprehensions of the proprietary instructions, and the operation of them, in defeating the bill by which they proposed to demonstrate their readiness and cheerfulness in answering all the reasonable expectations of the crown, could not but be well grounded: so that it was with extreme concern, they found their governor, who was, or ought to be, set over them for their protection, endeavouring to represent them in a light they detested and abhorred.

"The governor is but in the beginning of his administration," said they, "and if, when he received the proprietaries' commission, he was, 'in a great measure, a stranger to our constitution,' we apprehend he still continues a stranger not only to our constitution, but to the inhabitants, if he does not certainly know, that the king has not a more loyal people among all his subjects, than the inhabitants are, and have ever been, since the first settlement of this province; nevertheless they are convinced they ought not to be governed by proprietary instructions in opposition to their charter, which is, in our opinion, the foundation and sanction of our civil and religious liberties; and especially if these instructions must be secreted from them, and by that means the whole country left without any known rule of their conduct. And it surprises us extremely, that a request of this house, respectfully addressed to the governor, that he would be pleased to lay before us those instructions, or such part of them as might relate to the immediate service of the crown, and to the preservation of this his majesty's colony, in order that we might examine how far they interfered with that allegiance the proprietaries themselves, and all of us, owe to the crown, or with the privileges granted by our charters, should be represented by our governor as an act that 'might have a tendency to alienate the affections of the people of this province from his majesty's person and government, and thereby greatly obstruct the measures he is taking, at a vast expense, for the preservation and protection of his subjects upon this continent.' That thus contending for the rights granted us by the royal charter, which is the known rule of our conduct, should have a tendency of that kind, under a king, who has been graciously pleased to declare, 'that nothing in this world can give him so much pleasure as to see his subjects a flourishing and happy people,' is so foreign from our thoughts, and we trust will be so foreign to every impartial construction, that we may safely leave it without any further remarks of our own. But if it should have a tendency to alienate the affections of the people from being bound by private proprietary instructions, the blame is not with us, who have never been consulted upon them; and if we had been consulted, should have thought ourselves obliged to declare, that we have a great dislike to proprietary instructions, and that so far as they are against the prerogatives of the crown, or an infringement of our charter, they are illegal, and void in themselves."

They then cite sir William Keith's declarations concerning proprietary instructions before inserted; and at the same time intimate, that he was the first governor who gave bond for the performance of them.—In answer to that part of the proprietary instructions which the governor had so cheerfully laid before them, concerning a militia, &c. they begged leave to say, "that, as it requires money to be levied upon the people for providing arms and stores of war, and building magazines, we are of opinion it may be time enough to deliberate upon it, when we are informed how far he is at liberty by his instructions to pass our bills; and whether himself, or the representatives of the people, are the proper judges of the manner of raising such monies. And when these, our civil and religious rights, are secured, we cannot doubt all will rise up as one man in behalf of our king, our country, and our charters, according to our several stations and abilities."

Coming then to the governor's state of their revenue, they show, he was as much a stranger to that as to the people and the constitu-

tion; and, that instead of having fourteen or fifteen thousand pounds in bank, they could not have above seven thousand pounds; as also, that, what with the very large sums they had paid for the support of government, and for Indian and other expenses, their treasury and loan-office were almost quite exhausted. After which they proceed as follows: "But admitting the governor's computation in all its extent, if twenty thousand pounds, as he is pleased to inform us, will go but a very little way to raise and maintain such troops as he may think necessary, and without which we had better, in his opinion, do nothing at all, how can the inconsiderable sum we have any power over, answer his demands, though we should ruin the persons now outstanding in our loan-office, by the immediate sale of their lands? we are unwilling to make any further remarks on this head, which has, we find, been heretofore insisted upon by our late governor, but carries with it, as we conceive, such appearances of severity, without answering any good purpose, that we think it our indispensable duty to oppose it, as far as in justice we may; and now more especially, when we have offered a bill which would raise a generous sum of money immediately, for the use of the crown, in a manner that would be most easy and most agreeable to us all. Whilst we are upon this article, as the governor must be in a great measure a stranger to our accounts, we take the liberty to remark, that the proprietary patents make, as we are informed by the trustees, near one half of the mortgages now outstanding. These, after paying for their lands out of the money borrowed from the province, are to improve them with the remainder, if any; and as they must have shelter for themselves at least, however mean, and some land cleared for their subsistence, it necessarily puts them in arrears, let them be ever so honest and industrious; whilst the purchases of such their lands are constantly complied with on granting the patents, the bulk of which, we presume, may have been remitted to Great Britain, and makes a very sensible diminution of the silver and gold current among us: so that all ranks of people, however flourishing the governor may be pleased to represent us, complain justly for want of a due medium to carry on our trade; but as this inquiry is not immediately before us, we shall at present leave it, and proceed to inform the governor yet farther, that his computation of our annual income is also too high; for as our excise, *communibus annis*, yields about three thousand pounds (out of which five hundred pounds is yearly applied towards sinking the sum of five thousand pounds, heretofore granted to the king's use) the interest payable into the loan-office is much about the same sum; and his error in the last article, we presume, might arise, upon a supposal that our whole principal sum of eighty thousand pounds was always yielding an interest; but this has ever been found impracticable, as considerable sums must be continually changing hands, by virtue of our re-emitting acts. Besides which, the province has, out of that principal sum, lent considerable parts of it, without yielding any interest at all; and particularly a debt from the city of Philadelphia, still due upon the first and second thirty thousand pounds' acts, long since expired. And, until that is in our hands, it would be unjust to compute an interest arising from it, or upbraid us with it, as money which ought to have been in our hands by law, whilst some may think we have no power to sue for it by the laws in being."

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plying the remainder to the exchange of torn and ragged bills now current in this province;' and the governor well knows, it adds no more to our paper-currency than the very twenty thousand pounds granted the king, and even that struck for no other reason than to answer the immediate call of the crown, and to make the grant effectual."

In answer to the governor's assertion, that the French were already in possession of part of their province, they instance the language constantly used here at home: to wit, that the French had invaded his majesty's territories in Virginia; as also a map then lying before them, founded on authorities supplied by the board of trade and their own proprietaries, wherein every fort built by the French is placed beyond the western boundaries of Pennsylvania; and they again took refuge behind the cautions so minutely expressed and strongly insisted upon, in the first letter from the secretary's office, urging, that while the two crowns were still in a state of amity, it could answer no good purpose to contravene them; and that the king himself, having most graciously interposed, it would be more prudent and becoming to consider him as the most proper judge of the limits of his own dominions.

In their next section, they dispute the probability and almost the possibility of the arrival of such a body as six thousand of the best troops of France at the lower fort upon the Ohio, as asserted by the governor; insinuate, that such accounts would have deserved more credit, if they had been transmitted from Oswego, near which they must have necessarily passed; and from whence very minute intelligence was received of the passage of those forces which first laid the foundation of the enemy's strength upon the Ohio; and leave the fact to rest upon its own evidence.

After this referring to their dispute with governor Hamilton, and the information they gave him of an instruction from the crown, not to pass any private act, or act of privilege to any individual, without a suspending clause, which had never been enforced by the proprietaries, or observed by any governor, they plead a necessity of informing the governor, though with great reluctance, "That in the year 1735, governor Gordon passed an act for vesting more effectually certain lands in George M'Call, in direct contradiction to that instruction, without the least mention of a suspending clause."

And with an elevation of sentiment, style, and manners, seldom seen in public papers, they finish their reply as follows:

"As we have reason to believe the assembly was then acquainted with that instruction, and as the bill particularly related to our honourable proprietaries, our last assembly, notwithstanding the indiscreet call upon them, contented themselves, from motives of prudence and moderation, with barely pointing out this transaction, in hopes our honourable proprietaries would see themselves at least equally concerned with the representatives of the people both in fact and right, and thereby might be induced to join cordially with the people of this province, in vindicating our charter from the continual infraction of such instructions; which, if they must operate in the manner the governor is pleased to contend for, and our proprietary instructions must be binding upon us also, the rights derived to us by the royal charter is a name only, whilst the very essence of it is effectually destroyed: under the sanction of which charter, a sober, industrious people, without any charge to the crown or the proprietary, first settled this wilderness, and by their frugality, and the equity of their laws, laid the foundation of a flourishing colony, which already, within the ordinary life of a man, has made a considerable addition to the dominions of the crown, by an increase of dutiful and loyal subjects, and bears no mean rank in contributing to the wealth and trade of our mother country.

"Whether the above act for granting five thousand pounds for the king's use, or the act for vesting lands in George M'Call, were ever sent home for the royal approbation, very little concerns us, as we presume the transmitting our acts is the immediate duty of our proprietaries, or their lieutenants, in pursuance of the royal charter, which we look upon as the anterior solemn royal instruction, for the rule of their conduct, as well as of our own.

"Upon the whole, from what we have said, we presume it evidently appears, that proprietary instructions and restrictions upon their governors, as they have occasionally been made a part of the public records at different times, have been judged and resolved by our governor, council, and the representatives of the people, either,

"1. Inconsistent with the legal prerogative of the crown settled by act of parliament.

"2. Or a positive breach of the charter of privileges to the people.

"3. Or absurd in their conclusions, and therefore impracticable.

"4. Or void in themselves.—Therefore,

"Whenever the governor shall be pleased to lay his proprietary instructions before us for our examination, and if then they should appear to be of the same kind as heretofore, his good judgment should lead him to conclude, that such 'considerations in life' as our allegiance to the crown, or the immediate safety of the colony, &c. are sufficient inducements for him to disobey them, notwithstanding any penal bonds to the contrary, we shall cheerfully continue to grant such further sums of money for the king's use, as the cir-

cumstances of the country may bear, and in a manner we judge least burdensome to the inhabitants of this province."

Lastly, that they might be able to set all imputation and misrepresentation whatsoever at defiance, they applied themselves to find out some expedient, by which the service recommended to them by the crown might be promoted as far as in them lay, even without the concurrence of the governor. In order to which, having thoroughly weighed the contents of sir Thomas Robinson's last letter, and the state of the provincial treasury in which there was scarce five hundred pounds remaining, they unanimously resolved to raise five thousand pounds on the credit of the province, for the accommodation of the king's troops; and impowered certain members of their own to negotiate the loan, and allow such interest as should be found necessary.

The controversy, however, which this new governor had been so ingenious as to work up to such a pitch in so short a time, was, by the continuance of the same ingenuity, to be still continued as warm as ever.

Accordingly, down came another message from him, in which he complains to the assembly, of the very great obscurity, unnecessary repetitions, and unmeaning paragraphs contained in their last performance; and through the whole, manifests that spirit of perverseness, which is but too prevalent with most men on the like occasions. Of the inaccuracies before acknowledged in the performance (and which are perhaps unavoidable in pieces drawn up from a variety of suggestions, and subject to a variety of alterations and additions,) he takes all the advantage he can; and does indeed foul the water, though he cannot divert the current.

It would be endless to wade through all the minutenesses of so tedious a contest; and odds if the reader did not leave the writer in the midst of it.

To be as concise as possible, therefore: his paper is as insidious as that of the assembly was candid and open. He would not allow that he had promised them a sight of his instructions, with regard to their bill for granting twenty thousand pounds to the king; which was so far true, because he could have none regarding that particular measure; he would not allow that he had represented their application for those instructions, as having a tendency to alienate the affections of the people from the king; which was also true, because such his representation had been confined to the expressions they had made use of concerning the invasion of their civil and religious liberties; the last of which is indeed no otherwise to be accounted for, than by the demand made upon them, to establish a militia, and thereby oblige those to carry arms, who made it a point of conscience to disavow resistance by force; those expressions, he would needs have it, had the tendency he ascribed to them; because, "he very well knew how fond the people were of their currency, and how averse to any restraint upon it." He endeavoured to embroil them with the crown, for having called the instruction in question, an infraction of the royal charter. He reproached them both with ingratitude and with injustice, for being pleased to be angry with their proprietaries. In vindicating the affections of those gentlemen to the province, he derived his argument from their interest in it; and he is peremptory, that, instead of entertaining designs to invade the just rights and privileges of the inhabitants, there was nothing they so much detested and abhorred; he adhered to the resolution he had taken, nevertheless, not to lay his instructions before them at that time; being sensible they were no way necessary, and that the assembly, having already declared them destructive to their liberties, they were not in a proper temper for the consideration of them; to show he was not restrained by proprietary instructions from passing bills for the defence of the country, he declares himself ready to pass a law for establishing a militia, &c. and for emitting any sum in paper-money, on proprietary terms; that is to say, on such funds as might sink the same in five years. He perseveres in maintaining, that the act of the sixth of queen Anne had been shamefully slighted even in their province; because pieces of eight were then, and had been, for many years past, current at seven shillings and sixpence; whereas, according to that act, they should pass for six shillings only: as if money, like all other commodities, would not find and fix its own value, in spite of all the precautions and provisions the wit of man could invent. He also maintained, that, on a re-examination of the provincial accounts, their revenue was seven thousand three hundred and eighty one pounds per annum, clear of the five hundred pounds per annum for sinking the five thousand pounds, formerly given for the king's use; and, that the sums due, and which, by the laws in being, should have been paid in the September preceding, amounted at least to fourteen thousand pounds. He averred, they could not but be sensible that the twenty thousand pounds currency they proposed to give, and called a generous sum, was very insufficient to answer the exigence, and that it was not two pence in the pound, upon the just and real value of the estates of the province; and, in short, he said whatsoever else occurred to him, which could favour his purpose of figuring here at home: as if he was in all respects right, and the assembly in all respects wrong.

Argumentatively then, if not historically,

we have now the merits of the case before us, and may safely pronounce, that, if instructions may or can be construed into laws, instructions are then of more value than proclamations, which do not pretend to any such authority.—That, though grants from the crown are in the first instance matter of grace, the subject may claim the benefit of them as matter of right.—That when the prerogative has once laid any restraint on itself, nothing short of a positive act of forfeiture, or act of parliament, can authorize any species of resumption.—That if a subsequent instruction may cancel or obviate an original grant, charters, under all the sanctions the prerogative can give them, are no better than quicksands.—That in the charter given to William Penn, Esq. and solemnly accepted as the basis of government, by his followers, there is no reserve on the behalf of the crown, to tie up the province from making the same use of its credit, which is the privilege of every private subject.—That, notwithstanding all the pretended sacro-sanctitude of an instruction, probationary at first, neither renewed or referred to, directly or indirectly, by his majesty or his ministers afterwards, and virtually discharged by a subsequent act of parliament, which expressly restrained some colonies, and consequently left the rest in possession of their ancient liberty, the governor was notoriously ready to dispense with it on proprietary terms.—That the difference between five and ten years for sinking the bills, was a point in which the national interest had no concern.—That if the eastern colonies, which were those restrained by the said act, might nevertheless, in case of exigence, make new issues of paper-money, those unrestrained might surely do the same in the like case, on such terms, and after a mode, as appeared most reasonable to themselves.—That, according to all the representations of the governor to the assembly, if true, the fate of the province, if not of the public, depended on their giving a supply.—That, consequently, no exigency could be more pressing than the present, nor emission of paper-money better warranted.—And that he could, nevertheless, leave the province exposed to all the calamities which that exigence could possibly bring upon it, or upon the service in general, rather than give up one proprietary item: whereas the difficulty imposed upon the people manifestly was, either to be a prey to their invaders, or give up every privilege that made their country worth defending: which shows, in the fullest, clearest, and most unanswerable manner, that all proprietary interposition between the sovereign and subject, is alike injurious to both; and that the solecism of an *imperium in imperia*, could hardly be more emphatically illustrated.

To the crown, under this difficulty, the assembly now thought it high time to make their appeal; in humble confidence, that a fair and modest state of their case, would recommend them to the royal protection, and skreen them from the malignity of their adversaries.

That the governor, however, might not, in the mean time, remain ignorant of their sentiments, they made another application to him by message; in which they apprised him of what they had done, and of their joining issue with him in submitting their cause to his majesty's decision; as also, of their inclination to adjourn till May, for the sake of their own private affairs, to relieve the province from the expense they sat at, and suspend the uneasiness which a contest, like to be endless, and in which they were treated with so little decency, had given to them. And having thus, as they observed, reduced what immediately concerned them, within a narrow compass, they first declare, it was hard for them to conjecture, how the governor came by his knowledge of the people's fondness of their currency, and aversion to restraints on that head; seeing they had not petitioned for any increase of it, nor the assembly offered any such bill, during his administration, except that which comprehended the sum given for the king's use, and that only as the best method they could devise for making the grant effectual. On the behalf of the late assemblies, they next insinuate, that when they did offer such bills they were but for a very moderate sum, founded on minute calculations of their trade, and guarded against the danger of depreciation, by such securities as long experience had shown to be effectual. Proceeding then to the governor's re-assertion concerning the shameful slights put on the money-act of queen Anne, they appeal to the testimony of the board of trade in favour of their own as a reasonable act, and the royal sanction given thereto, by which it is declared, that their provincial bills of credit are lawful money of America, according to the said act of queen Anne; as also to the course of exchange ever since, as a full confutation of his charge. They further plead a necessity to differ from him in his state of the public money; assure him the computations he relied upon were made without skill, or a sufficient knowledge of their laws; adhere to the justice and rectitude of their own state; maintain, that by the laws in being, seven thousand pounds was the most they had power over, which sum, since their last settlement, had been greatly reduced by the very heavy charges of government; and, having recapitulated what the governor had been pleased to say concerning the insufficiency of their grant, &c. conclude in the following spirited manner:

"What the governor may think sufficient, is as much a mystery to us, as he may appre-

hend his proprietary instructions are; but, we presume, it may be sufficient for all the purposes in sir Thomas Robinson's last letter, and as much or more, than we think, can be reasonably expected from us. How the governor became so suddenly acquainted with the real value of our estates, is not easy to conceive; but we know from long experience, having many of us received our birth in this province, that the inhabitants are not generally wealthy or rich, though we believe them to be, in the main, frugal and industrious, yet it is evident that their lands are greatly incumbered with their debts to the public. From these considerations, we are obliged to think the governor's estimation of our wealth is undoubtedly too high, unless he includes the value of the proprietary lands; for, by the report of a committee of assembly in August, 1752, it appears, that the taxables of this province did not exceed twenty-two thousand; and the grant we have offered of twenty thousand pounds, from the best calculations we can make, doth at least amount to five times the sum that hath ever been raised by a two-penny tax through this province. As we think the governor cannot be a competent judge of the real value of our estates, in this little time of his administration, and as we have now submitted our cause to higher determination, we conceive ourselves less concerned in his computations of our estates, whatever they may be.

"The governor is pleased to inform us, 'That the proprietaries are too nearly interested in the prosperity of this country, to do any thing to its prejudice, and he should have imagined that the people could not now stand in need of any proofs of the proprietary affection, or suspect them of having any designs to invade their just rights and privileges, which, he is confident, they detest and abhor.' We cannot suppose the governor would mean they detest and abhor our just rights and privileges; and yet we are convinced the clause in their commission to him, their lieutenant, whereby they impower him to act as fully and amply, to all intents, constructions, and purposes, as they themselves might or could do, were they personally present, 'You, (our governor) following and observing such orders, instructions, and directions, as you now have, or hereafter, from time to time, shall receive from us, or our heirs,' is not only repugnant to our just rights and privileges, but impracticable, against common sense, against law, and void in itself; and yet if the governor should think his hands are so tied up by these instructions, that he is not at liberty to act for the public good, we must conclude they are of dangerous consequence at all times, and particularly in this time of imminent danger, not only to ourselves, but to the British interest in North America."

To this message the governor returned a short answer in these words:

"*Gentlemen*,

"I am very much surprised at your proposal to adjourn till May, as you have made no provision for the defence of the province, or granted the supplies expected by the crown, and recommended by the secretary of state's letters: I must, therefore, object to the proposed adjournment, while things remain in this situation, and hope you will, in consideration of the danger to which your country stands exposed, continue sitting till you have granted the supplies to the crown, and effectually provided for the defence of the people you represent; but if you are determined to rise at this time without doing any thing, remember it is your own act, and all the fatal consequences that may attend your leaving the province in this defenceless state, must lie at your doors."

The house in return unanimously resolved, "That the governor has been respectfully and repeatedly solicited by this house, to pass a bill presented to him, for granting twenty thousand pounds for the king's use, which, in our opinion would have answered the expectations of the crown from this province, as signified by the secretary of state's letters, had the governor been pleased to have given it his assent; therefore whatever ill consequences ensue, from supplies not having been granted at this critical juncture, must lie at his door."

The governor, by his secretary, demanded a copy of their minutes. The house ordered the minutes both of this and their last sessions to be printed, and that a copy finished should be delivered to the governor: and, having then resolved to adhere to their adjournment, adjourned accordingly.

In the beginning of March, however, the governor thought fit to re-assemble them, and assigned the arrival of general Braddock, the necessity of considering what he had to propose without delay, and making the provisions expected by his majesty for the service in time, as his reasons for so doing. In the same message he also acquainted them, "That he had issued a commission to a number of men acquainted with the country, to form a plan of opening roads from the inhabited parts of the province westward towards the Ohio, at the requisition of sir John St. Clair, quarter-master-general, to facilitate the march of the troops, conveyance of provisions, &c. and also to prepare an estimate of the expense, which he called upon them to provide for; also, to be enabled to take such a part in the measures proposed by the eastern governments for the maintenance of his majesty's just rights, &c. as became the honour and interest of a province circumstanced like theirs. Having then premised, that it

was said the large supply of provisions furnished to the French from these colonies, not Pennsylvania in particular, which he acknowledged had little concern in that unnatural trade, had enabled the enemy to support their forces in America, he informed them, he had given the officers of the customs preventive orders in relation thereto; and added, that he made no doubt of their joining with him in a law to make those orders more effectual. The desire of the eastern governments, that Pennsylvania would join with them in their operations to frustrate the schemes of the French, made his next topic; and he grafted a hope upon it, that they would enable him to take such part as became the honour and interest of a province, circumstanced like theirs. The establishment of a post between Philadelphia and a place called Winchester, at the desire of general Braddock, was what he recommended next; and that again was followed by another desire of the same general's, that the quotas for the common fund of the several provinces, recommended by the secretary of state, might be lodged in the hands of a treasurer, subject to his demands, in order to expedite business; and the general being perfectly disinterested, as also willing to account for his disbursements, he hoped they would put it in his power to return him a satisfactory answer; and for a conclusion, he recommended vigour, unanimity, and despatch, that the happy opportunity put into the hands of the colonies by his majesty's paternal care, &c. might not be lost."

That there was no retrospect in this message was some recommendation of it; but the merit of this forbearance lasted no longer than till the afternoon of the very same day, when the house was artfully perplexed with two messages more, which could not but revive the memory of past dissensions, and consequently the ill humour they had produced. The first contained a reprimand for their having printed sir T. Robinson's letters, communicated to them without his, the governor's, privilege or consent, and a caution against the publication of them; and an intimation, that though he had letters and other papers relating to his majesty's service to communicate to them, he did not think it safe to do it, without proper assurances that the contents should remain a secret. The second being nearly as short, and rather more extraordinary, shall be given in his own words:

"*Gentlemen*,

"On the tenth of January last, I demanded, by the secretary, a copy of the minutes of your proceedings, which you promised to send me; but not receiving them, I did, on the twenty-ninth of the same month, by letter to the speaker, again demand them, and have frequently, by the secretary, reiterated my request, but could not obtain a sight of them till the twelfth instant, above two months after your rising, and then only a part of them were sent me in print, and I have not yet seen the whole of them.

"The keeping your proceedings thus a secret from me, I take to be a very unconstitutional and extraordinary measure, liable to a construction that I do not choose at present to put upon it, but only to acquaint you that I expect you will order your clerk to attend me every night with the minutes of the day, that I may know what is done and doing in your house, and be able in time to lay the same before his majesty and his ministers, who expect to be regularly informed of the measures taking by the legislatures of the colonies."

Both were answered the next day in substance thus, "That they were humbly of opinion, such letters as those in question, containing the commands of the crown, ought generally to be inserted in their minutes as being the foundation of their proceedings, and what might be necessary for their justification; that those letters were communicated without the least caution to keep the contents a secret; that the latter, which was the most material of the two, was a circular letter which had been sent in effect to all the provinces and colonies in North America, and of which the substance, as they were informed, had been printed in the speeches of several governors to their assemblies; that the design of sending two regiments from England, and raising two more in America, was no secret, having been avowed even in the London Gazette; that the governor himself had given very full and particular abstracts of those letters, in his messages which had been printed in their own gazettes long before the house adjourned, and passed without objection; that they were, therefore, surprised at the exceptions started now to the insertion of them in their minutes, and, no single inconvenience to result from it, having been pointed out, were not inclined to expunge them; that knowing not what assurances of secresy would be satisfactory, they could only say, that whenever it should appear to the house to be necessary for the king's service, or the public good, to keep any matters laid before them secret, proper measures, they doubted not, would be taken for that purpose." Proceeding then to what related to the governor's demand of a copy of their minutes, they adjourned, "That they had ordered the said minutes to be printed with all convenient speed, and, when finished, that a copy should be delivered as required; that as soon as they could be copied and revised by a committee of the house, they were put to press; and that the governor had been supplied with a copy of the greatest part of them even before they were finished; that it had been the constant practice of the house to have their

minutes so revised, and to postpone the said revisal, till after the rising of the house; and that till this was done, no copies had ever been given out, unless of special votes on special occasions; that the principal matters contained in these minutes were generally to be found in the governor's speeches or messages, and the answers of the house; and that these, together with such votes as were most material, were, for the most part, immediately printed in the newspapers, that the rest was chiefly matter of form; that, therefore, as it would be inconvenient to the house to make up and perfect their votes daily, so as to send a copy to the governor, as they saw no public service concerned in it, nor knew of any right in the governor so peremptorily to demand it, they were not inclined to alter their ancient custom; that his charge of taking extraordinary or unconstitutional measures to keep their proceedings a secret from him, was void of any real foundation; that as to the construction put by the governor on their conduct, they neither knew nor could guess what it was; that whatever it was, they had rather it had been spoken plainly, than insinuated, because they might then have known how to justify themselves; that, however, being conscious of firmest loyalty to the crown, and the most upright intentions to the people they represented, they were not very apprehensive of any great prejudice from such insinuations; the reflecting on the weight and importance of the matters laid before them in the morning message, which, moreover, so earnestly pressed them to unanimity and despatch, they could not but be surprised at receiving messages of so different a kind in the afternoon, and which could only tend to produce division and delay, &c.—And that, therefore, they humbly entreated the governor to suspend those his irritating accusations and novel demands till a season of more leisure, and that he would permit them to proceed, without any farther interruption, on the business for which he had been pleased to call them together."

Not to be diverted, however, from the pursuit he was in by this caution, he sent a letter to the printers for the assembly (one of whom was a member) forbidding them to publish the secretary of state's letters; and ordered his secretary to inspect the journals of the house from the 17th to the 20th of March then current, both inclusive, and to take a copy thereof. Upon the former of which measures they resolved, that the said letters had been properly inserted; that the house had by sufficient reasons shown, that the expunging those letters was both improper and unnecessary; that the right of directing what should, or should not be inserted in the minutes of the house, was solely in the house; and that the governor had not, nor could have, any right to interfere therein: and they ordered the printer to proceed with the publication of their minutes as they then stood; and with regard to the latter, they informed the governor by message, "that when their minutes should be revised and printed after the end of the session according to long continued custom, a fair copy should be presented to the governor; but that till then they hoped the governor would excuse them if they did not permit any body to inspect them, or any copy of them to be taken."

Here this little ruffle ended: and while it was yet subsisting, the governor informed the house, as a secret which he recommended to them to keep so, "that governor Shirley, with the concurrence of his council and assembly, having, among other measures, formed a design to build a fort near Crown Point, within the limits of his majesty's territories, had sent commissioners to this and other governments, to solicit their contributions to the same undertaking; that the said governor had written to him fully upon this head, that he should communicate his letter to them, that they might see what was expected from the province; that Mr. Quincy, his commissioner, was actually arrived, and had made his application to him; and that he heartily recommended it to them to grant the necessary supplies for that important service."

Upon the heels of this, by another message he also informed them of, and congratulated them upon, the arrival of the transports, with the forces and artillery destined for the American service in Virginia; after which he proceeded, as in the last session, to say, "that his majesty's care and affection for his subjects in America having induced him to so large and seasonable an assistance, for the recovery of those possessions which the French, contrary to the faith of treaties, had seized, they would be greatly wanting to themselves if they neglected the opportunity to frustrate the attempts of that perfidious people; that to render his majesty's measures effectual, it was expected, that the colonies should raise an additional number of forces, and should furnish provisions and all necessaries to those employed for their protection; as they would see by a letter from the earl of Halifax, and another from general Braddock, which were to be laid before them; that this being so reasonable in itself, he could not doubt its being readily complied with by all the provinces, in proportion to their abilities; and he hoped, that as Pennsylvania was the most interested in the event, they would exert themselves as became the representatives of a province actually invaded, and having their all depending on the success of the present enterprise; that he earnestly besought them to consider what might be the consequence of their refusing to grant the necessary supplies, as they might be assured his majesty would not condescend to

recommend to them in vain the making provision for their own defence, but would doubtless, upon their refusal, be enabled by his parliament to oblige those who reaped the immediate benefit of such a chargeable protection to contribute their proportion of it; and that if by a disappointment in the articles expected to be supplied by them, the great expense the nation had been put to for the security of these invaluable branches of the British empire, should be rendered unavailable, they could not but think they would justly draw upon themselves the resentment of his majesty, and a British parliament."

How unusual soever such language was on such occasions, and how inconsistent soever with the claims and rights of freemen, the assembly not only stifled their resentments of it, but proceeded the very same day to do all that was required of them with all the alacrity imaginable.

Twenty-five thousand pounds was the sum they granted to the king's use: five thousand pounds of it was appropriated for the sum borrowed for the service at the last sitting; ten thousand pounds for the purchase of provisions, at the request of the government of Massachusetts-bay, for victualling their forces; five thousand pounds, to answer the occasional draughts of general Braddock; and the remaining five thousand for the maintenance of such Indians as had taken refuge in the province, and other contingent expenses in their votes expressed: and the whole was to be raised by an emission of paper bills to the same amount, and to be sunk by an extension of the excise for ten years.

If the other part of the former bill concerning torn and ragged bills, was mentioned, or at all insisted upon, it could not be carried; the majority on this occasion resolving, that no provincial consideration of that kind should furnish the least pretence for any obstruction to the general service.

Upon the 28th of March, 1755, this bill was left with the governor, and on the first of the next month he sent them the following message, viz.

"*Gentlemen*,

"Your bill for striking twenty-five thousand pounds, being contrary to his majesty's instructions relating to paper-money, and of the same nature with the bill I refused my assent to the last sitting of the assembly, I cannot pass it into a law, without a breach of duty to the crown; and I am concerned you should offer such a bill to me, when you had agreed to submit the dispute between us, upon one of the like kind, to his majesty.

"As this is a time of imminent danger, and the forces raised and destined for the service of the colonies must wait the supplies from this province, I again entreat you to fall upon some other method of raising money, that we may not lose this happy opportunity of recovering his majesty's dominions, now invaded by the subjects of the French king, and preventing their unjust encroachments for the future.

"But if these repeated recommendations of so reasonable a supply, shall fail of the desired effect, and any ill consequences should attend it, his majesty and his ministers, a British parliament, your own constituents, and the neighbouring governments will be at no loss on whom to lay the blame."

This message was also accompanied with another, dated March 31, in which the governor having referred to an account to be given them by his secretary, of several matters committed to the care of one Scarroyady, an Indian chief, by the Ohio Indians, made use of it as an additional goad to the assembly, in the manner following:

"*Gentlemen*,

"So much depends on the disposition and measures of the Indians at this time, that I must earnestly recommend it to you to make provision for the ensuing treaty, as well as to enable me to take proper notice of this chief, who is so hearty in our interest, and of the young men he has brought along with him, in order to be employed in some services, which, he says, are of importance to the general cause.

"It will readily occur to you, that the several western Indians, who wish well to the English interest, wait with impatience for the return of this chief, and will form their measures according to the report which he shall make to them of our treatment of them: for which reason, it will be of the last consequence, that this chief, and these young men, go from us well clothed, and perfectly well pleased."

On the same day also, Mr. Quincy, commissioner to the province from the government of Massachusetts-bay, presented a memorial to the assembly, which containing an unquestionable testimonial in their favour, deserves to be inserted entire as follows, viz.

"*Gentlemen*,

"I am extremely sorry to find, that notwithstanding all the motives and arguments I was able to offer his honour the lieutenant-governor, he did not see his way clear to give his consent to the money-bill you have laid before him.

"The cheerfulness with which you therein granted ten thousand pounds, for victualling the forces intended to march from New England to secure his majesty's territories, leaves me no room to doubt your zeal for his majesty's service, or your hearty concurrence with the government I have the honour to represent, in the measures now proposed for our common safety; and therefore, though you are unhappily disappointed in the manner of

your grant, I flatter myself you will not fail to find some other means of rendering it effectual.

"The advantages which a speedy and vigorous execution of those measures promises to all the colonies, and the mischiefs which a neglect of them will entail upon us and our posterity, are clearly pointed out, and fully illustrated in the papers which have been the subject of your late deliberations. . .

"In rendering this important service to the crown, to the British nation, and to their fellow-subjects in the other governments, New England offers to spend her treasure as freely as her blood, and, were her abilities equal to her zeal, would as cheerfully bear the whole expense, as she undertakes the whole hazard of the enterprise. But the vast yearly charge she is subjected to, by her vicinity to the French, and the necessity of defending so extensive a frontier from the incursions of those perfidious people, and their Indians, both in time of peace and war, has so exhausted her finances, and burdened her with such a load of debt, that, without the assistance of the neighbouring more wealthy colonies, she must drop the design, however promising and glorious, as utterly impracticable.

"Happy will your province be, gentlemen, if you can still keep those dangerous people at a distance from your borders, by which you will be free from the many mischiefs we have always suffered by their neighbourhood.

"The opportunity is now offered you, and, if embraced, will, by the blessing of God, secure your future peace and prosperity. But whatever you do, should be determined instantly, for the season flies, and the delay may oe as pernicious as a refusal.

"I have just received advice, that Connecticut has voted fifteen hundred men, and that even the little government of Rhode Island has granted four hundred, the expense of which will be more than is asked of you. New York seems heartily disposed to do her part; and there is reason to think that your good example may have an advantageous influence on your neighbours of New Jersey.

"I need say no more to urge you to a speedy and effectual resolution, but conclude, with the utmost respect, gentlemen, Yours, &c."

The rest of the day was spent in debates, as it was natural it should; but on the morrow they resolved to raise fifteen thousand pounds on the credit of the province, in the manner they had done before; that is to say, five thousand pounds to repay the sum so before borrowed for victualling the king's troops, and ten thousand pounds to answer the request of the Massachusetts government, so earnestly enforced by Mr. Quincy.

Thus, one would think, they had done all that could be reasonably required of men: they had dropt the particular concern of the province; they had overlooked whatever was offensive in the governor's messages and behaviour to them, they had forborne all altercation thereon; and Mr. Quincy, on behalf of the government he represented, presented them such a paper of acknowledgment, as abundantly verifies all that is here said of them, to wit:

"Sir,—The sum which this honourable assembly has granted to his majesty's use, and appropriated for victualling the troops intended to be marched for securing his majesty's territories, is an instance of your concern and zeal for the public safety, which I doubt not will be highly acceptable to his majesty. And as it was made in consequence of my application to you, I beg leave to return you my grateful sense and acknowledgment; and to assure you, in the name and behalf of the government I have the honour to represent, that it will be duly applied to the purposes for which it was granted."

The governor, however, dissatisfied still, because disappointed and defeated, first evaded the assembly's demand of the restitution of their bill according to custom, and then refused it, saying, "That it was a bill of so extraordinary a nature, that he thought it his duty to lay it before his majesty, and should keep it for that purpose."

He also informed them by message of intelligence he had received, that the French had fitted out fifteen sail of the line, with which they were sending out six thousand land forces, and that the king's ministers were not in the secret of their destination; yet as they were bound for America, and could not be ignorant that Pennsylvania was both a plentiful and defenceless country, he thought it his duty to call upon them to enable him to put it into a posture of defence, by establishing a regular militia, and providing the necessary stores of war.

This message was dated April 3d, and yet on the 8th following he advised them to make a short adjournment, because he was to receive the governors Shirley and De Lancey, that evening, and was to accompany them to Annapolis, there to confer with general Braddock, and the governors Sharpe of Maryland, and Dinwiddie of Virginia; after which, it was probable, he should have several matters to lay before the assembly; but, as a parting stroke, he called upon them to make some provision for Scarroyady, before mentioned, and his young men, which they did—not without some wholesome hints, that they had been long enough already a charge to the province; that there were proper lands where, and it was a proper season when, they might both hunt, and plant their corn, by which they might provide for themselves; and that as to the Indian treaty they had been required to make provision for, the governor could not expect they could come to any immediate resolution,

till they had received the necessary information concerning it.

It was in this manner they parted. The adjournment they made was only to the 12th of May, and yet the governor both complained of that term as too long, and said he should call them sooner if there was occasion. When they met, they gave the governor notice as usual, and that they were ready to receive whatever he had to lay before them. The governor's answer was, that he had nothing to lay before them at present but the German bill; a bill, that is to say, recommended by the governor himself, from the notorious necessity of it, for preventing the importation of German or other passengers or servants in too great numbers in one vessel, and for preventing the spreading of contagious distempers, imported by or together with them, &c. This had been prepared by the house at their last sitting, and sent up to the governor; had been returned with amendments by him; some of these amendments had been adopted: and then the bill had been again sent up, with a desire from the house, that the governor would be pleased to pass the same as it then stood. This he had not been pleased to do, but on the contrary had referred it to the consideration of his council, by whose advice he had been determined to adhere to his amendments; under which declaration it was now again sent down to the house; who having appointed a committee to draw up a message to the governor, representing the inconveniences to be apprehended from the said amendments, and agreed to that message, on the report of the same, came to a resolution of adjourning on the morrow to the first of September.

To say this message was of the most pathetic, rational, and interesting kind, is to say the least that can be said of it: it explained the evil to be remedied, and the consequences to be apprehended from a continuance of it, in the most affecting terms; it demonstrated, that the amendments insisted upon by the governor were calculated to deprive it of all its vigour and utility; that in effect the province was to be as much exposed to the same nuisances and dangers as ever; and what gave the most offence of all, by the following paragraph the inhabitants were led to the very source of so crying a grievance.

"By our charters, and the laws of this province, the whole legislative power is vested in the governor and the representatives of the people; and as we know of no other negative upon our bills but what the governor himself has, we could wish he had been pleased to have exercised his own judgment upon this our bill, without referring the consideration of it to a committee of his council, most of them such, as we are informed, who are, or have lately been, concerned in the importations, the abuses of which this bill was designed to regulate and redress."

Now, whichever party was in the right, can it be said, that the king, or the supply for his service, or any one of the points in the preceding session agitated, had any concern in the rise, progress, or issue of this controversy? has it not been already observed, to the honour of the assembly, how cautiously and prudently they had avoided whatever could tend to widen the breach on any of these heads? is it not fresh before us, that, even for want of provocation, the governor himself was forced both to part with them, and meet them again in peace. And yet having declared as we have seen, that he had nothing to communicate to them, consequently nothing to ask of them, other than what related to this German bill; did he take the hint from hence to treat them by message in the following extraordinary manner, viz.

"*Gentlemen*,

"When I summoned you together on the 17th of March last, I was in hopes you would bring with you inclinations to promote the public service, by granting the supplies expected by the crown, and by putting this province into a posture of defence; but I am sorry to find, that neither the danger to which this country stands exposed, nor his majesty's repeated and affectionate calls, have had any weight with you.

"The bill you sent me for striking twenty-five thousand pounds, was of a more extraordinary nature than that I refused my assent to in the winter sessions, as it gave general Braddock a power over no more than five thousand pounds, and subjected the remaining twenty thousand, and all the surplus of the excise, for eleven years to come, to the disposition of some of the members of your house, and to the assembly for the time being.

"The offering money in a way, and upon terms that you very well knew I could not, consistent with my duty to the crown, consent to, is, in my opinion, trifling with the king's commands, and amounts to a refusal to give at all; and I am satisfied will be seen in this light by my superiors; who, by your bill above-mentioned, which I shall lay before them, and by the whole of your conduct since you have been made acquainted with the designs of the French, will be convinced, that your resolutions are, and have been, to take advantage of your country's danger, to aggrandize and render permanent your own power and authority, and to destroy that of the crown. That it is for this purpose, and to promote your scheme of future independency, you are grasping at the disposition of all public money, and at the power of filling all the offices of government, especially those of the revenue; and when his majesty and the na-

tion are at the expense of sending troops for the protection of these colonies, you refuse to furnish them with provisions and necessary carriages, though your country is full of both; unless you can, at the same time, encroach upon the rights of the crown, and increase your own power, already too great for a branch of a subordinate and dependent government, so remote from the principal seat of power.

"You have, gentlemen, by a vote of your own house, without the consent of the government, impowered a committee of your members to borrow money upon the credit of the assembly, and to dispose of the same to certain uses in that vote mentioned. You have also, by votes and resolves of your own house, created bills or notes of credit, made payable to the bearers thereof, to the amount of fifteen thousand pounds, which you have issued in lieu of money, and they are now circulating in this province, without the approbation of the government. You have denied me access to your journals, and refused me copies of your minutes. And you have printed and published the secretary of state's letters to me signifying his majesty's commands, not only without my consent, but contrary to an order I had issued to the printers, expressly forbidding the publication of those letters.

"Whether you have a right to the exercise of such extraordinary powers, his majesty and his ministers will judge, before whom it is my duty to lay your proceedings as soon as I can come at them, and to whom they will appear the more dangerous, as neither they nor you can know but a future assembly may use those powers against the government by which they are protected.

"While I had any the most distant hopes of your coming into measures that might promote the public service at this critical conjuncture, I suffered some parts of your conduct to remain unobserved upon; but as I am now convinced, from the whole tenor of your behaviour, and from your message of yesterday, notifying your intentions to adjourn till September next, without granting the necessary supplies, that you have no design to contribute any thing towards the defence of this country, I thought it right to be no longer silent upon those heads.

"Gentlemen, when the bill to prevent the importation of the Germans, &c. was under my consideration, I took such advice upon it, and made such amendments to it, as I thought would best answer the public purposes, and put that trade upon such a footing as to prevent the many abuses that had been practised in it, and at the same time secure this city and province against the coming in and spreading of infectious distempers. How far the bill, as proposed by you, or amended by me, would, or would not, have answered those ends, was a matter proper to be considered at a conference, which you might have desired if you had thought proper, as it is the only means of bringing a bill to perfection, when the branches of the legislature differ in opinion concerning any amendments proposed to it; but instead thereof, you have sent me a message filled with unjust reflections upon the amendments proposed by me, and plainly designed to represent me, as having no regard for the health or safety of the inhabitants of this country; in doing which, I cannot think you have paid a proper regard to truth. However, as it is not my intention to enter into a controversy with you upon that bill, which might have been agreed upon between us, had the usual method of proceeding in such cases been pursued by you, I shall say nothing more upon the head, especially as this matter seems purposely chosen to lead me and the public from considering that part of your conduct that must, in its consequences, most nearly affect the inhabitants of this province."

It is in every reader's power to confute every article of this message from the materials before him, though not to account for the governor's reasons for so unseasonably exposing himself; but as we have heard one party, 'tis fit we should hear the other, and if they have been guilty of any partiality, or failed in any point of justice to themselves, let him supply the defect or correct the error that finds himself qualified so to do.

The piece that ensues was their answer. To wit:

"*May it please the Governor*,

"When we met, in obedience to the governor's summons, on the 17th of March last, we really brought with us the sincerest inclinations to promote the public service, by granting the supplies expected by the crown; and we trust it will appear to all who impartially examine the proceedings of that session, that we did every thing in our power, as our affairs were then circumstanced; and consequently that the danger to which this country stood exposed, and his majesty's repeated and affectionate calls, had great weight with us, whatever they had with the governor.

"The bill we sent up, for striking the sum of twenty-five thousands pounds, and giving the same to the king's use, and for providing a fund to sink it, had nothing extraordinary in its nature, or differing from other bills heretofore passed or presented for like purposes in this province, excepting that the sum given was extraordinary, compared with the time proposed for sinking it; the sum for the Canada expedition, in the last war, being but five thousand pounds, to be sunk in ten years, and this sum, though five times greater, was to be sunk by the same fund, in the same number of years. In the bill five thousand

pounds of the sum was appropriated to pay for provisions bought and given for the use of the forces in Virginia, under general Braddock; ten thousand pounds more was given to buy provisions for the New England forces under his command; five thousand pounds more was subjected to his order, and to be disposed of for the king's service as he should think fit; and the remaining five thousand pounds was appropriated for the subsistence of Indians taking refuge in this province, payment of posts or expresses, hire of carriages, clearing of roads, and other necessary contingent expenses for the king's service, as might be incumbent on this government to discharge. Thus the whole twenty-five thousand pounds was appropriated to the king's service; and almost all of it to the immediate use of general Braddock, or to such purposes as were by him especially recommended in his letters, laid before the house by the governor. The members of the house, mentioned by the governor, were to have no share in the disposition of it; it was disposed of by the bill, and they could only have the trouble of laying it out according to the appropriation, and keeping the accounts. This is truth, and well known to the governor, if he perused our bill with any degree of attention; yet how differently is it represented in the governor's message! it is called only, 'a bill for striking twenty-five thousand pounds;' which is but a part of the title, the words, 'and for giving the same to the king's use,' being (as it would seem) carefully omitted, lest they might militate against the assertion which immediately follows, that, 'twenty thousand pounds of it was subjected to the disposition of some members of the house, and of the assembly for the time being.' Then it is said, 'it gave general Braddock a power over no more than five thousand pounds,' because it gave him a power to draw for, and appropriate as he pleased, no more than that sum, though all the twenty-five thousand pounds (except a small part for the support of Indian refugees, which is likewise for the king's service) was appropriated for his, and his army's use, or services by him required; and we cannot learn that any other colony besides, hath given, or offered to give, that gentleman a power over as many pence. Great subtilty and dexterity appear in this manner of disguising truths, and changing appearances, but we see in it very little candour and ingenuity.

"In the next paragraph of the governor's message, there are many assertions in which we think we are equally misrepresented; we are charged with 'offering money in a way, and upon terms which we knew the governor could not, consistent with his duty to the crown, consent to.' We really thought, and still think, it was inconsistent with his duty to the crown to refuse it; if we are mistaken, 'tis an error in judgment; we have appealed to our gracious king on this head, and we hope for a favourable determination. We are charged with 'trifling with the king's commands, and refusing to give at all,' though we have actually given great sums in obedience to those commands, and earnestly endeavoured to give much greater, which the governor refused, unless we would give in a manner which we think inconsistent with our present just liberties and privileges, held under the royal charter. We are charged with 'resolving to aggrandize our own power, and destroy that of the crown;' a charge as we conceive, utterly groundless, and for which we have never given the least foundation. We are charged with a 'scheme of independency.' We have no such scheme, nor ever had; nor do we, as a part of the legislature, desire any independency but what the constitution authorises, which gives us a right to judge for ourselves and our constituents, of the utility and propriety of laws, or modes of laws, about to be made; and does not yet, and we confide never will, oblige us to make laws by direction. We are charged with grasping at the disposition of all public money, and at the power of filling all the offices of government: a charge, as we conceive, equally groundless and invidious; we have, by law, a right to dispose of some public money, and we cannot be properly said to grasp at what we are in possession of; that part of the public money, which the governor receives, arising by licenses, &c. great as it is, he disposes of as he pleases, and we have never attempted to interfere in it; nor can one instance be given of our attempting to fill any office, which we are not by some express law impowered to fill. But the heaviest charge of this paragraph concludes it; the governor is pleased to say, 'when his majesty and the nation are at the expense of sending troops for the protection of these colonies, you refuse to furnish them with provisions and necessary carriages, though your country is full of both; unless you can at the same time encroach upon the rights of the crown.' This charge is really amazing! it requires, however, no other answer, than a simple relation of fact. In the same session, and as soon as it appeared there was no hope of obtaining the bill for giving twenty thousand pounds to the king's use, and many weeks before the forces arrived, we voted and gave five thousand pounds to purchase provisions and other necessaries for those forces; these provisions were accordingly bought, and are sent to Virginia, being the full quantity required of us: we have since given ten thousand pounds to purchase provisions for the New-England forces; it was given as soon as requested, and before the troops were raised; those provisions are most

of them actually purchased, great part sent away, and all will probably be at the place appointed before they are wanted. We gave not a pound of provision less than was asked of us, and all the carriages required of us have been furnished. This has been done with the greatest readiness and alacrity, and done, we conceive, without the least encroachment on the rights of the crown, unless 'borrowing money on our own credit' (which we thought even every private man had a right to do, if he had any credit) be indeed such an encroachment.

"Indeed the next paragraph begins with charging this upon us as a crime, 'you have, the governor is pleased to say, by a vote of your own house, without the consent of the government, impowered a committee of your members to borrow money upon the credit of the assembly, and to dispose of the same to certain uses in that vote mentioned.' By this caution in expressing the uses, a stranger might imagine, that they were wicked, if not treasonable uses, and that the governor, out of mere tenderness for his people, forbore to explain them; but the uses mentioned in the votes, are, to purchase fresh victuals, and other necessaries, for the use of the king's troops at their arrival; and to purchase and transport provisions requested by the government of the Massachusetts-bay, to victual the forces about to march for securing his majesty's territories. These are the uses, in the votes mentioned, and the only uses; and we can conceive no reason for touching them so gently by the name of certain uses, unless the governor thought, that being more explicit on the uses, might seem to lessen, in some degree, the heinous crime of borrowing money on our own credit.

"The governor is pleased to add, 'you have also, by votes and resolves, of your own house, created bills, or notes of credit, made payable to the bearers thereof, to the amount of fifteen thousand pounds, which you have issued in lieu of money, and they are now circulating in this province, without the approbation of the government.' This charge, we presume, will, like the rest, vanish on a little explanation. By the laws of this province now in force, and which have received the royal assent, the disposition of the interest-money, and excise, is vested in the assembly for the time being: out of this revenue the assemblies have, from time to time, defrayed the charges of government. The constant method of payment was always this; when an account against the public was allowed, or any expense for public service agreed to, an order issued, drawn on the treasurer, or trustees of the loan-office, and signed by the speaker, or the clerk, by order of the house. As these orders were generally paid on sight, they naturally obtained some credit, and sometimes passed through several hands before payment was demanded. At the last settlement of the public accounts, it appeared, that a considerable sum of this interest and excise-money, over which the assembly alone had a legal power, ought to be in the hands of the treasurer and trustees. The governor himself was pleased to point this money out to us, to compute the sum, and urge the house to make use of it, when in January last he refused their bill for giving twenty-five thousand pounds to the king's use. The house alleged, and truly, that the money was outstanding in many hands, and could not suddenly be collected, without distressing and ruining the people. However, on the credit of this fund, we voted the first five thousand pounds for provisions, and ordered the money to be borrowed on interest. And at the last sitting, when the governor refused to pass our bill for giving twenty-five thousand pounds to the king's use, he may be pleased to remember, that he sent us down a message in which, after the reason given for not passing the bill, there are these words: 'As this is a time of imminent danger, and the forces raised and destined for the service of the colonies, must wait the supplies from this province, I again entreat you to fall upon some other method of raising money, that we may not lose this happy opportunity of recovering his majesty's dominions now invaded by the French king.' The house accordingly fell on this other method: they gave ten thousand pounds of the money in their power to the king's use; they appointed a committee to purchase the provisions required, and impowered them to draw for the sum on the treasurer or trustees of the loan-office, as had been usual; with this only difference, that as former draughts were payable on sight, and therefore bore no interest, these being payable in a year, were to bear interest; and in the mean time the outstanding money was ordered to be got in, that the draughts might be punctually discharged. Monied men, knowing the goodness of the fund, and confiding in the justice and punctuality of the assembly, which has always honourably discharged the public debts, have voluntarily furnished the committee with cash for these draughts, which they have laid by in their chests to receive in time the interest. Thus the king's forces have been expeditiously supplied, the people have time to pay off their debts to the public, and no one is oppressed, distressed, or injured; nor is any encroachment made on the powers of government, or any thing done that has not been usual, or which the assembly are not by law impowered to do. Yet this is what the governor represents as 'creating bills of credit, and issuing them in lieu of money, without the approbation of the government;' by which, persons unacquainted with the fact, might understand

we had been making paper-money, and issuing it on loan, or in some other manner, to produce an advantage to ourselves, and attempted to make it a legal tender without the governor's assent, &c. all which is mere misrepresentation or misapprehension, as will appear by the resolves themselves, to which we beg leave to refer. After this explanation of our conduct, we believe it will clearly appear, that the governor's insinuation, as if we had used powers dangerous to the government, is as groundless as it is unkind.

"The other charges, of 'denying the governor access to our journals, and printing the secretary of state's letters,' having been made and answered in former messages between the governor and the house, we think it unnecessary to take any further notice of them here. But we are surprised to find, that after having effectually given fifteen thousand pounds, in provisions and other necessaries for the king's forces, maintained at so great an expense our Indian allies, established a constant regular post through two hundred miles of country, merely for the service of the army, and advanced a considerable sum to make a long and chargeable road through the wilderness and mountains to the Ohio, for the use of the king's forces, the whole expense of which we have engaged to defray, we should still be flatly told by the governor, 'That he is convinced from the whole tenor of our behaviour, that we have no design to contribute any thing towards the defence of this country.'

"The governor is pleased further to censure us, for not desiring a conference on the bill to prevent the importation of Germans, or other passengers, in too great numbers in one ship or vessel, and to prevent the spreading of contagious distempers, &c. We own that it is sometimes practised, when the governor and assembly differ in judgment concerning a bill, to request a conference, if there be any hope by such a conference to obtain an agreement; but we being, from many circumstances attending the bill, without such hope at present, contented ourselves with laying before the governor, in a message, our reasons for not agreeing to his proposed amendments, and submitted those reasons to his consideration; the bill may still be resumed, and a conference entered into at a future session, if there should be any prospect of success. If our proceeding was irregular, which we think it was not, the governor may be pleased to remember, he himself set us a more irregular example at our last sitting, when we presented him the bill for granting twenty-five thousand pounds to the king's use; for he neither proposed any amendment, nor desired any conference, nor would return us our bill (when we expressly sent for it to be reconsidered) according to the constant custom in this government, but only acquainted us, that, 'it being a bill of a very extraordinary nature, he would send it home to the ministry,' which we hope he has accordingly done, as we believe it will be found, however the governor may have misapprehended it, to have nothing extraordinary in its nature, or inconsistent with our duty to the crown, or assuming more than our just rights and privileges.

"On the whole, while we find the governor transforming our best actions into crimes, and endeavouring to render the inhabitants of Pennsylvania odious to our gracious sovereign and his ministers, to the British nation, to all the neighbouring colonies, and to the army that is come to protect us; we cannot look upon him as a friend to this country. We are plain people, unpractised in the sleights and artifices of controversy, and have no joy in disputation. We wish the governor of the same disposition: and when he shall, as we hope he will, on better consideration, alter his conduct towards us, and thereby convince us that he means well to the province, we may then be able to transact the public business together with comfort both to him and ourselves; of which till then we have small expectation."

Such was the language of liberty, truth, and candour—we feel the force of it—we cannot resist its authority! and if the governor had the mortification to find they had ordered both his message and their answer to be printed in their gazettes, he had also the pleasure to find himself excused for the present by their adjournment, from the impossible task, of constructing such a reply as the pressure of this case required.

Perhaps they thought the absurdity he had fallen into, by charging them with a resolution to take advantage of their country's danger, to aggrandize and render permanent their own power and authority, too glaring to need any comment. Perhaps they did not think it proper to retort, that the inhabitants of a colony, so remote from the principal seat of empire, had abundantly more to apprehend from an excess of power in their governor, than the governor could possibly have from a like excess in their representatives; the executive, as before observed, being a single principle always in force, and the legislative composed of two co-equal principles, which must always tally, or can no otherwise operate, than by restraining and controlling the operations of each other, as in the case before us; and, perhaps, they had not the resolution of the house of commons of July 2, 1678, in sight at that time, which was as follows, viz.

"That all aids and supplies granted to his majesty in parliament, are the sole gift of the commons; that all bills for the granting any such aids and supplies ought to begin with the commons; and that it is the undoubted and

sole right of the commons to direct, limit, and appoint in such bills, the ends, purposes, considerations, conditions, limitations, and qualifications, of such grants, which ought not to be changed by the house of lords." To say nothing of certain remarkable provisions of theirs in the year 1678 (which, in a course of conferences with the lords, they adhered to) to appoint a receiver of their own for the administration of the money then granted for the payment and disbanding of the army, and the payment of the same into the chamber of London, instead of the exchequer.

Their adjournment was to the first of September; but they were assembled by special summons on the 13th of June; and the first minute on their books of public note is, one, to specify the approbation given by the lords justices to governor Thomas's act for granting five thousand pounds out of bills of credit for the king's use. The date of this approbation is October 9, 1748, so that it was subsequent to the king's instruction so pertinaciously insisted upon; and having, either by some accident or neglect been overlooked thus long, the governor, as we have seen, had in the December before taken the advantage to express himself thus hardily to the assembly: "Colonel Thomas's conduct is no rule to me, nor will mine be for any one that may succeed me; and if we may judge from his not transmitting that act to England, we may presume, that he did not look upon that particular as the most recommendatory part of his administration. It is true; he was never censured for it; and, indeed, how could he, as the transaction was never made known to his majesty or his ministers."

And the next minute that follows this, concerning the said approbation, notifies,

That sundry letters from sir Peter Halket and colonel Dunbar were then read, acknowledging the receipt of certain presents from the house to the officers of their respective regiments, of the most considerate and acceptable kind, and returning thanks for the same.

The reason of this summons assigned by the governor in his message was to this effect, "That general Braddock having begun his march towards fort Du Quesne, had represented to him, 'That in case he should reduce that fort, his intentions were to leave a garrison, with all the guns, stores, &c. he should find in it; that in case the French should abandon and destroy the fortifications, &c. as he had reason to apprehend they would, he should then repair it, or construct some place of defence; but that in either case, as the artillery, stores, &c. he had with him would be absolutely necessary for the prosecution of his plan, he was determined to leave none of them behind him, and expected to have all his wants of that kind, as well as provisions for his garrison, supplied by the governments of Virginia, Maryland, and Pennsylvania; and, that he might not be delayed in his operations, those things might be immediately forwarded to him under proper convoys;' adding, that the said general had lately received intelligence, which he had communicated to him, that the French, together with their Indians, intended, as soon as the army was far advanced, to fall upon the back country; and that, though the general thought it a bravado, he also thought it adviseable to take all possible precautions against it; that he had called them together upon this application and intelligence; that he had recommended it to them to enable him to furnish such of the things demanded as were proper for the province, and to conduct them to the places where they would be wanted, which could not be well done without a strong guard; as also by a militia or otherwise, to protect the said back country against the incursions of the enemy; that, upon the receipt of the general's letter, he had written to the governors of Virginia and Maryland, to know what shares of these supplies their governments would respectively furnish; that he needed not inforce the point by any other arguments, than that fort Du Quesne was within their province, and that the great expense the nation was at on this occasion would be thrown away, his majesty's intentions rendered abortive, and his arms dishonoured, if the countries the said general should recover were left in such a naked condition, that the French might take possession of them again, as soon as the army should be withdrawn, &c.

A very little skill in political matters would have shown those concerned, that there was rather more management concealed under this speech than was strictly necessary, and put them on their guard accordingly.

The assembly of Pennsylvania had some wisdom as well as much plainness; and therefore, by way of preliminary, desired to have the letter in their custody, which was to be the ground of their proceedings. The governor hesitated: said it contained many matters not proper to be made public; that it would not be safe, therefore, unless the house would previously promise him it should not be printed; but however, he would show it to a committee, if the house would appoint one for that purpose. The house on the other hand, renewed their request in writing, alleged that it had always been the custom, when assemblies were called together on occasion of letters received, to communicate those letters; that giving a committee a sight of letters, on which any important step was to be taken, did not seem sufficient; but that the letters should lie before the house to be read as often as necessary to the right understanding of the matters they contained or required; that the governor might safely put his trust in the prudence of the house; in fine, they would hear of no a-

ternative, since the importance of the contents of that letter had been urged as the reason for calling them together at so unseasonable a time of the year; and, as they could not take the letter into consideration without seeing it, they hoped he would not, by starting new methods of proceeding, and engaging them in trivial disputes, any longer obstruct or delay the public service.

This was done the sixteenth. The next day, instead of an answer, the governor sent them down a brace of new messages. One in the morning, giving them to understand, "That the roads they had ordered to be made to the Ohio would be attended with a much greater expense than was at first imagined; that the money sent to the commissaries was already spent; that more was wanting; and, that the general having discharged the soldiers' wives out of the army, with a stoppage of one shilling sterling a week out of their husband's pay for their subsistence, it would become the compassion of the province to supply what would be farther necessary for that purpose;" and another in the afternoon, containing more intelligence. Intelligence he himself had now received, and had forwarded to the general: namely, that several bodies of troops had passed from Canada over the lake Ontario in their way to the Ohio, to join the forces already there; that the French were doing their utmost to engage the Indians on their side; and, rather than fail, were determined to oppose general Braddock with the whole force of Canada. Containing also a repetition of what in effect he had said before concerning the back country; heightened with some new apprehensions, that when the troops were removed, the enemy might either cut off or greatly interrupt their communication with the province, which might be every way attended with fatal consequences. And all was made use of to authorize a fresh demand for a militia-law, and a new demand for a supply to enable him to build strong houses on the new road to the Ohio, and to maintain such a number of men as should be necessary to keep the communication between the province and the army open, escort provisions, stores, &c. that the general might neither be forced to weaken his army by making detachments from it, nor expose those detachments to be surprised and cut off; and that he might occasionally make use of them as auxiliaries too, in case the numbers brought against him should make such a reinforcement necessary; and (after having rung all the changes that such a medley of demands and suggestions in such hands was capable of) making the province answerable, as usual, in case of non-compliance, for all mischiefs.

On the 21st, however, when the house (having taken into consideration, that the fifteen thousand pounds given to the king's use in the preceding April, and paid out of the money in the disposition of the house, which was almost exhausted, could not answer all the purposes intended by the bill for granting twenty-five thousand pounds to which the governor refused his assent) had already prepared two money-bills, one for striking ten thousand pounds for the exchange of defaced bills, and one of fifteen thousand pounds more for the king's use, the governor's answer concerning general Braddock's letter came; and therein he asserted, that the governor for the time being had a right to call the assembly together whenever he thought the public service required it; that his speeches or messages were a sufficient foundation for them to proceed upon; that they having, by the plenitude of their own power, not only given their orders to the printers to proceed with the publication of the secretary of state's letters, in contradiction to his to the contrary, but also claimed a right of doing the same by any other papers laid before them, they could not be at a loss for the reason of his caution on the present occasion; that he being answerable for every secret of state that should be communicated to him for the king's service, and by the nature of his station the sole and only judge what letters and papers were proper to be made public, did expect a promise of secresy from the house, either verbal or otherwise, or something tantamount to it; and that otherwise he should not communicate it.

And, on the twenty-sixth following, the assembly returned their answer. In the opening of which, having admitted the governor's right or power to call them together, they, nevertheless, insist on the usual manner of exercising it; that is to say, with a proper regard to the convenience of the members at their harvest, and to despatch, when necessarily summoned at that or other unseasonable times, for the sake of keeping up a good understanding between the governor and them. "But," said they, "should our governors consider this power, as a power of bringing us together at a great expense to the country, merely to show their abilities in contriving new modes, or making new demands upon the people, to obstruct the ends of their meeting, we apprehend it will answer no valuable purpose." That his speeches and messages were a sufficient foundation for them to proceed upon, they also admitted to be occasionally true; but then they were of opinion, on the contrary, that when his writs of summons were founded on letters or advices, referred to in his said speeches and messages, they had a right to have the original papers laid before them; and they averred this had ever been the practice in their province; so that a different conduct at that time could only tend to obstruct the public business before them. "If governors,"

they farther intimated, "might differ in their modes of conducting themselves, according to the different reasons for choosing them or purposes to be served by them, it became the people nevertheless to be consistent with themselves at all times, which could never be if they did not make original papers the rule of their proceeding. The objection drawn from their printing the secretary of state's letter, so often recurred to by the governor, though so fully confuted, they would not allow to be of any weight, unless he could show, their printing it had discovered any of his majesty's designs and commands, with respect to the French, not more generally known before by his own messages, the public prints, and the speeches of other governors; especially as it had been communicated without any caution, and had been printed before this objection of his was known. Answerable for every secret of state communicated to him by his superiors as such, they seemed willing to allow; but such as he was enjoined to lay before the assembly, they contended, were so to be laid before them, and they were to be responsible for the use made of them afterwards. And as to his sole and only power of judging what papers were fit, and what not, to be laid before the public, they so far disputed it, as to except such papers as were necessary for their justification, which, they presumed, were subject to the decisions of their own prudence only, wherein they were assured he might very safely confide."

The more trivial this dispute may appear, the more apparent becomes that spirit of perverseness which the proprietaries had let loose, to keep the province in a perpetual broil; till, weary of the conflict, they should grow tame by degrees, and at last crouch, like the camel, to take up what load, and carry it what length of way, their drivers pleased.

On the said 21st of June, when the governor's litigious message thus answered came down, the house sent up their two money-bills with a message, importing, that the several services, by them enumerated, having almost exhausted their treasury, they had sent up a new bill to give the additional sum of fifteen thousand pounds for those purposes; in which bill, said they (for the rest of the message shall be given in their own words) "We have carefully followed the act passed by governor Thomas, in 1746, for granting five thousand pounds for the king's use, and the other acts relating to our bills of credit, confirmed by the crown on the twenty-ninth of October, 1748; from which acts so confirmed, the enacting clauses, so far as they could be made agreeable to our present circumstances, have been inserted in this bill, that every objection arising from the royal instruction to colonel Thomas, in 1740, might be obviated by a direct decision of the highest authority. And as that confirmation of our acts, which we presume will have its due weight with our governor, may be more certainly known to him than it appears to have hitherto been, we take the liberty of sending him the original confirmation.

"We have only to entreat the governor would be pleased to give this bill all the despatch in his power, as our long sitting at this time is in every respect unseasonable, and the presence of many of our members is now absolutely necessary at their homes, for the better security of their harvests under their present calamitous circumstances."

To understand what is here meant by the words calamitous circumstances, it is necessary the reader should be informed, that Pennsylvania having been visited this year with a severe frost and drought, which had obliged the inhabitants in many places to mow their wheat, in order to supply the want of fodder for their cattle, no longer abounded in bread-corn, as it usually does; and very melancholy apprehensions began to be entertained, that the miseries of scarcity would be superadded to those of war.

From the 21st to the 25th, nevertheless, the governor brooded over the two bills (viz. the ten thousand pounds bill for exchange, and the fifteen thousand pounds bill for the king's use,) and then sent down a message acknowledging, that many of the bills of credit were in a bad condition; but requiring to be first satisfied, how much of the money formerly struck for exchanging bills, and of which three thousand three hundred and two pounds six shillings and eight pence was at the last settlement remaining in the hands of the trustees, was still so remaining, before he passed that bill. He was answered the same day, that, according to the best computation that could be made, the sum was one thousand three hundred and two pounds six shillings and eight pence. Before that answer could reach his hands, his secretary was despatched to the house with such amendments to the other, which was the principal bill, as he was, unquestionably, preconvinced the assembly would never comply with. And that this is no uncharitable or unreasonable assertion, is manifest from the whole tenor of his conduct, which was demonstrably such as would have better became a French governor than an English one.

The assembly, however, bestowed a proper time of consideration on those amendments, and then acquainted him by message, that they adhered to their bill in all its parts; but accompanied this declaration with a question, Whether he would pass it into a law as it then stood? to which he answered first, that he would take it into consideration; and finally gave it under his hand, that he adhered to his amendments, without assigning any

reasons, desiring a conference, or having recourse to any other expedient usual on the like occasions.

The ten thousand pounds bill for exchanging torn and defaced money, met with a better fate; for, after some concessions on both sides, it was passed into a law; and this was almost the only fruit of a session so unseasonably exacted, and introduced with such extraordinary demands.

They then acquainted the governor by message, that they proposed to adjourn to the first of September then next ensuing; and the governor signified in reply, that he had no objection thereto.

Notwithstanding which he summoned them again to meet on the 23d of July; and they met accordingly, gave him notice thereof as usual, and required a copy of the writs by which they were summoned. His answer was not returned till the next day, and then what he said was to this effect: that he should have laid the business he had for the consideration of the house before them the day preceding, had not the shocking news he had received, prevented his getting it ready time enough; but that the house should hear from him that morning, and also have the copy of the writ as desired.

This shocking news was the strange, unprecedented, ignominious defeat of general Braddock; and what, if possible, is more shocking still, this incident, which, though so inconsiderable to the whole, struck so much horror through every part, had no other effect on him, than the miracles of Moses had on the heart of Pharaoh.

If the exposed condition of the province had before furnished him with topics for levies of money and troops, and for placing an unlimited confidence in him their governor, and his first movers the proprietaries, he now thought it would render his eloquence irresistible; and at all hazards resolved to make the most of it.

Fear, though most and enfeebler of any of the passions, has the strongest dominion over us; and while we are scarce half of ourselves, it is not to be wondered, that we become the property of any body else.

With a face, and a voice, and whatever else was suitable for the practice now to be tried, did the governor now meet the assembly; and having despatched his text (the defeat of Braddock) in less than six lines, came at once to use and application in the terms following: "This unfortunate and unexpected change in our affairs, will deeply affect every one of his majesty's colonies, but none of them in so sensible a manner as this province, which, having no militia, is thereby left exposed to the cruel incursions of the French and their barbarous Indians, who delight in shedding human blood, and who make no distinction as to age or sex—as to those that are armed against them, or such as they can surprise in their peaceful habitations—all are alike the objects of their cruelty—slaughtering the tender infant and the frighted mother with equal joy and fierceness. To such enemies, spurred on by the native cruelty of their tempers, encouraged by their late success, and having now no army to fear, are the inhabitants of this province exposed—and by such must we now expect to be overrun, if we do not immediately prepare for our own defence; nor ought we to content ourselves with this, but resolve to drive and confine the French to their own just limits."

Here the noble example of the eastern governments (New England) in forcing the enemy to keep a due distance from their borders, was recommended and enforced; and then returning to his main point, he again expatiated thus: "Allow me therefore, gentlemen, to recommend to your most serious consideration the present state and condition of your country, the danger to which the lives and properties of all those you have undertaken to represent, stand exposed at this critical and melancholy conjuncture; and to desire that you would not, by any ill-timed parsimony, by reviving any matters that have been in dispute, or from any other motive, suffer the people to remain any longer undefended, or the blood of the innocent to be shed by the cruel hands of savages. There are men enough in this province to protect it against any force the French can bring, and numbers of them are willing and desirous to defend their country upon the present occasion, but they have neither arms, ammunition, nor discipline, without which it will be impossible to repel an active enemy, whose trade is war. I therefore hope, that you will, without delay, grant such supplies as may enable me not only to secure, the people of this province, but by reinforcing and assisting the king's troops, enable them to remove the French from their present encroachments.

"If something very effectual be not done at this time for the safety and security of the province, the enemy, who know how to make the best use of a victory, will strengthen themselves in such a manner, that it will be next to impossible for us to remove them."

In effect, the assembly chose, for this once, to be blind to the artificial part of his speech, and to discharge their own duty in such a manner, as should leave him, even on his own premises, inexcusable for any failure on his side.

On the very next day they granted an aid to the crown of fifty thousand pounds; and though it is plain by this that they did not want a goad, on the next following, when they had the ways and means of raising this sum under consideration, the governor, by mes-

sage, apprised them that colonel Dunbar, with the remainder of the king's forces, had reached fort Cumberland; and that, as soon as his circumstances would admit, he intended to continue his march to Philadelphia; and that he had laid these matters before them, that they might fall upon measures, as soon as possible, for the protection of the western frontier.

But this had not the desired effect; for the assembly in their reply most rationally suggested, that colonel Dunbar's forces might be employed on this service; and requested the governor to make use of his instances accordingly. This he could not refuse; but the sequel may show how little desirous he was of having the province defended by those forces.

The next day, while the house was debating on the ways and means, among which one was known to be taxing the proprietary estate in proportion with others, a pompous message was sent down, containing an offer on the part of the proprietaries, of one thousand acres of land, west of the Alleghany mountains, without purchase-money, and for fifteen years clear of quit-rents, to every colonel who should serve on an expedition from that or the neighbouring provinces against the the French on the Ohio; seven hundred and fifty to each lieutenant-colonel and major; five hundred to each captain, four hundred to each lieutenant and ensign, and two hundred to every common soldier; and requiring the house to afford some assistance to such as should accept the same.

To make up weight, a letter of intelligence from an Indian trader lately returned from Canada, whither he had fled to avoid being apprehended for killing a man, was sent along with this message; and, upon the heels of both, a remonstrance (not a petition) was conjured up, from sundry inhabitants of the city and county of Philadelphia (emigrants from the famous borough of Totness it must be presumed) and presented to the assembly, containing a submissive conceit, that one hundred thousand pounds was as small a sum as would answer the present exigency; and signifying the willingness of the presenters to contribute their proportion of the same, or of a larger sum if necessary; not to insist on sundry petitions from many of the inhabitants of three townships; and two more from sundry inhabitants of the county of Chester, who made it their prayer to be furnished with arms and ammunition for defence of their houses and families.

The assembly, in the mean time, with a degree of composure and steadiness, which in a higher orbit would be called dignity and magnanimity, delivered their sentiments and purposes in one address to the governor, in the following concise but weighty terms: viz.

"We have deliberately and seriously considered the governor's speech of the twenty-fourth instant, together with the letters and papers he has been pleased to lay before us, by which we find, that the defeat of the forces, under the immediate command of general Braddock, and the retreat of colonel Dunbar, to fort Cumberland, are attended with very shocking circumstances; nevertheless, it gives us real satisfaction, under this unfortunate and unexpected charge in our affairs, that this province has seasonably and cheerfully complied with the demands of the king's forces, and that no part of this unhappy defeat can be laid to our charge.

"We think it our duty on this occasion to be neither parsimonious nor tenacious of such matters as have been in dispute, and are now under the consideration of our superiors; but, reserving to ourselves all our just rights, we have resolved to grant fifty thousand pounds for the king's use, by a tax on all the real and personal estates within this province, in which we shall proceed with all possible despatch; hoping to meet in the governor the same good dispositions he so earnestly recommends to us.

"The governor's call of our house at this time is agreeable to us, as it impowers us to exert ourselves yet farther in the service of our country; and the like opportunity given to the lower counties, under the governor's administration, we doubt not will be acceptable to them, and add their contribution to the common cause, before the time to which they stand adjourned."

And now a plain, undefining reader would think, that, the danger of the province being so great as the governor had described it, and the disposition of the assembly so sincere to provide for its security, the issue of the session could not but be as happy as the prospect was promising.

The very reverse of this, however, happened to be the case. The assembly found the proprietaries in possession of an immense estate, in lands and quit-rents; this estate was as much endangered as any other estate, and was to be defended in common with the rest; they did not think the immensity of it gave it any title to any exemption of any kind, and they found no such exemption specified in any of their charters.

Proceeding, therefore, by the rules of reason and equity, as well as policy, they taxed the whole land alike; and subjected the proprietaries, as landholders, to a proportional share of all the claims and impositions, which their deputy would have exempted them from as governors in chief, and was so strenuous for imposing on the people alone; and this one bitter ingredient was *mors in olla*, death in the pot. The burdens laid by the proprietaries, or by proprietary power on the province, could not be too heavy; but they them-

selves would not charge a finger with the least part of the weight of them.

On the same day that the bill was sent up, it was returned with such amendments, as entirely exonerated the whole proprietary estate; and the following message was immediately prepared by the assembly, and despatched to the governor, to wit:

"*May it please the Governor,*

"The taxing of the proprietary estate with the estates of the people of the province, for their common security in this time of imminent danger, seems to us so perfectly equitable and just, that we are surprised the governor should propose it as an amendment to our bill,* that the proprietary estate be in this instance exempted.

"As the occasion urges, we are extremely desirous to come as soon as possible to a conclusion in the business of this sitting; and do therefore entreat the governor would be pleased to acquaint us explicitly, whether he is restricted by the proprietaries from passing the bill as it stands in that particular, though it were otherwise consistent with his judgment, since it will only waste time to endeavour to convince him of its reasonableness, if after all it will not obtain his assent.

"Or, if it be possible that such exemption of the proprietary estate from its share in the common expense of securing the whole, should appear to the governor a thing right in itself, we would then request him to favour us with the reasons of his opinion, that we may take them immediately into consideration; for till this matter is explained, and understood, we think it needless to consider any other proposed alterations."

To this the governor the next day replied.

"*Gentlemen,*

"In answer to your message of yesterday, you will give me leave to observe, that in the proprietary commission appointing me to this government, there is a proviso that nothing therein contained shall extend, or be construed to extend, to give me any power to do or consent to any act whereby the estate or property of the proprietaries may be hurt or incumbered; and this proviso being contained in the body of the commission from which I derive the power of acting as governor, it is not only the highest prohibition to me, but any law that I may pass contrary to that proviso, I imagine, would be void in itself for want of power in me to give it a being.

"But had I not been thus prohibited, I should still have thought it my duty, to have excepted the proprietary estate from the levies proposed to be made, for the following reasons.

"1. For that all governors, whether hereditary or otherwise, are, from the nature of their office, exempt from the payment of taxes; on the contrary, revenues are generally given to them to support the honour and dignity of government, and to enable them to do the duties of their station.

"2. For that this exemption from taxes arising from the nature of government, is enforced by a positive law in this province, which expressly declares, that the proper estates of the proprietaries shall not be liable to rates or taxes.

"3. For that the proprietaries, by their governor, having consented to a law for vesting in the people the sole choice of the persons to assess and lay taxes in the several counties, without reserving to themselves, or their governor, any negative upon such choice, and this concession being made with an express proviso, that the proprietery estates should not be taxed, it will be very unreasonable to impower such persons by a law, without their previous consent, to tax their estates at discretion.

"4. For that it is contrary to the constant practice and usage in this and all the proprietary governments upon this continent, so far as I have been informed, to lay any tax upon the lands or estates of the proprietaries, exercising the government by themselves or their lieutenants.

"For these reasons principally I made the amendments, relating to the proprietary estate, to your bill for giving fifty thousand pounds to the king's use, and I hope, gentlemen, they will be sufficient to induce you to agree to those amendments. Were the proprietaries now upon the spot, I know their love and affection for this country to be such that they would do any thing in their power for its preservation and safety; but as they are not here, I have, on their behalf, proposed to give lands west of the Alleghany mountains, without any purchase-money, and free from the payment of quit-rents for fifteen years to come, and then not to exceed the common quit-rent in this province. The particular quantity proposed as an additional encouragement for each officer and soldier, is expressed in a message to you upon that head."

And the next day but one the assembly rejoined, "That the intention of the bill was not to hurt or incumber (it being as little in their power or intention to hurt or incumber the estates of their constituents, as in the governor's to hurt or incumber the proprietary estate) but to free it from hurt and incumbrance; the worst of incumbrances, the neighbourhood of so mischievous an enemy, who, as they had been repeatedly told by the governor, had taken actual possession of some part, and laid claim to a much greater part of the proprietaries' coun-

* The bill laid the tax on all estates real and personal throughout the province, the proprietary estate "not excepted." The amendment proposed was in these words, "Dele the word [not] and insert the word [only."] A small, but very significant alteration!

try; they could not conceive how the giving a part to save the whole, and, in the proprietary's case, not only to save the whole, but to render it of double or treble value, could properly be called hurting or incumbering an estate; that if the argument had any force, it had the same force in behalf of the people; and, consequently, he ought in duty to reject both parts of the bill for the same reason; that for their parts, happening to think otherwise, they had laid the tax as cheerfully on their own estates as on those of their constituents.

"That the proposed grant of lands, for the encouragement of military adventurers, west of the Alleghany mountains, without any purchase-money, was as absolutely irreconcileable with the letter of the proprietary proviso in his, the governor's commission, as his assent to the tax upon their estate could be represented to be; that if their love and affection for their country was such, that if they were on the spot, they would do any thing in their power for its preservation; and if the governor, presuming on that love and affection, thought himself at liberty to dispense with so positive a prohibition, it might be asked, why could he not venture to do the same in one instance for the same reason as in the other? and if the grant of lands would be valid, notwithstanding such prohibition, why would not his assent to the bill be the same? that this magnified offer had in reality been proposed only to make the taxing of the proprietary estate appear less reasonable; that it was in effect an offer of amusement only, good lands not being so much as specified; and as good as the best there, being to be had in Virginia (where quit-rents were but two shillings, whereas the common quit-rents in Pennsylvania were four shillings and two pence sterling) without purchase-money, and with the same exemption of that quit-rent for fifteen years to come, so that the encouragement so graciously offered to those adventurers to recover the proprietaries' lands out of the hands of the enemy, was at the bottom no better than a proposal to reward them with a part of the lands they were so to recover, at more than double the price demanded in the neighbouring province, without any of the risk they were in the present case to be exposed to.

"That the governor being vested by the royal charter itself with all the powers granted thereby, for the good and happy government of the province, was in full capacity to pass the law in question, the proprietaries having no authority to restrain those powers; and all such restraints having been already considered and declared as null and void.

"That they did not propose to tax the proprietary as governor, but as a fellow-subject, a landholder and possessor of an estate in Pennsylvania, an estate that would be more benefited by a proper application of the tax than any other estate in the province; that the proprietary did not govern them, that the province, at a large expense, supported a lieutenant to do that duty for him; that if the proprietary did govern them in person, and had a support allowed him on that account, they should not have thought it less reasonable to tax him as a landholder for the security of his land; that they the representatives of the people, were also allowed wages for their service in assembly; and yet the governor, they insinuated, would hardly allow it to be a good reason why their estates should therefore be tax free; that it was scarce to be supposed the proprietary could, from the nature of his office, derive higher pretensions than the king himself; and yet that the king's tenants were, by every land-tax act, impowered to deduct the same out of their rent; and that the king's receivers were obliged, under severe penalties, to allow of such deductions; but that this was not the first instance by many, in which proprietors and governors of petty colonies have assumed greater powers, privileges, immunities, and prerogatives, than were ever claimed by their royal master, on the imperial throne of all his extensive dominions.

"That the positive law of this province hinted at by the governor as exempting the proprietaries' estates from taxes, was no other than the law for raising county rates and levies, which were in the same act appropriated to purposes for which the proprietaries could not reasonably be charged (as wages to assembly-men, rewards for killing wolves, &c.) not a general, constitutional law of the province; that by a positive law, the people's representatives were to dispose of the people's money, and yet it did not extend to all cases in government; that if it had, amendments of another kind might have been expected from the governor; seeing, that, in consideration of the purposes of the grant, they had allowed him a share in the disposition, and that he, by his last amendment, proposed also, to have a share in the disposition of the overplus, if any.

"That they begged leave to ask, whether, if the proprietary estate was to be taxed as proposed, it would be equitable for the owner to have a negative in the choice of assessors, since that would give him half the choice, in lieu, perhaps, of a hundredth part of the tax; that as it was, he had officers, friends, and other dependants, in every county, to vote for him, in number equal to the proportionable value of the share of the tax; that if the proprietary shrunk at the injustice of being taxed where he had no choice in the assessors, they again asked, with what face of justice he could desire and insist on having half the power of disposing of the money levied, to

which he would not contribute a farthing; that there was great impropriety in saying the proprietary estate was by this act to be taxed at discretion, seeing the assessors were to be upon their oaths or solemn affirmations, which gave the proprietary as good security for equity and justice as any subject in the king's dominions.

"That as to the governor's plea, deduced from usage and custom, they alleged, usage and custom against reason and justice, ought to have but little weight; that the usage of exemptions in cases where the proprietary estates could not be benefited by a tax, was not in point; that if it was, so far as regarded the estates of persons exercising government by themselves or lieutenant, it could not include the estates of proprietaries, who not only did not exercise government by themselves, but would moreover restrain their lieutenants from exercising the just powers they were vested with by the royal charter."

And their last paragraph was at once so cogent and pathetic, that it ought to be given in their own words, which cannot be amended. To wit:

"On the whole, we beg the governor would again calmly and seriously consider our bill, to which end we once more send it up to him. We know that without his assent the money cannot be raised, nor the good ends so earnestly desired and expected from it to be obtained, and we fear his resolution to refuse it. But we entreat him to reflect with what reluctance a people born and bred in freedom, and accustomed to equitable laws, must undergo the weight of this uncommon tax, and even expose their persons for the defence of his estate, who, by virtue of his power only, and without even a colour of right, should refuse to bear the least share of the burden, though to receive so great a benefit! with what spirit can they exert themselves in his cause, who will not pay the smallest part of their grievous expenses? how odious must it be to a sensible, manly people, to find him who ought to be their father and protector, taking advantage of public calamity and distress, and their tenderness for their bleeding country, to force down their throats laws of imposition, abhorrent to common justice and common reason! why will the governor make himself the hateful instrument of reducing a free people to the abject state of vassalage; of depriving us of those liberties, which have given reputation to our country throughout the world, and drawn inhabitants from the remotest parts of Europe to enjoy them? liberties not only granted us of favour, but of right; liberties which in effect we have bought and paid for, since we have not only performed the conditions on which they were granted, but have actually given higher prices for our lands on their account; so that the proprietary family have been doubly paid for them, in the value of the lands, and in the increase of rents with increase of people. Let not our affections be torn in this manner from a family we have long loved and honoured! let that novel doctrine, hatched by their mistaken friends, 'that privileges granted to promote the settlement of a country, are to be abridged when the settlement is obtained,' iniquitous as it is, be detested as it deserves, and banished from all our public councils! and let the harmony, so essential to the welfare of both governors and governed, be once again restored; since it can never be more necessary to our affairs than in their present melancholy situation! we hope the governor will excuse some appearance of warmth, in a cause of all others in the world the most interesting; and believe us to be, with all possible respect and duty to the proprietary family and to himself, his and their sincere friends and well-wishers."

The governor, on the other hand, to find them employment while he had this puzzling paper under his consideration, called upon them again in his majesty's name, like any constable, to put the province into a posture of defence by establishing a militia, so as that a due regard might be had to scrupulous consciences; and demanded an explicit answer.

This was done August 9, being Saturday; on the Monday following, he gave them to understand, by another message, that being quite uncertain, what effect his letters to colonel Dunbar with regard to the posting his troops on the western frontiers, would have; having also been required by him to provide quarters for his troops, and having upon application to the mayor and corporation of Philadelphia, to provide quarters for them accordingly, been told, that they knew of no law to authorize them for so doing; a law would be necessary for that purpose, and recommended it to them to prepare one, those troops being then upon their march into the province, whether they were to remain there or not.

And on the morrow he plyed them with another teaser; which, together with the assembly's answer of the same day, and his rejoinder of the 16th, shall be given in the respective terms they were delivered.

"*Gentlemen*,

"I am importuned by the Indians, to let them know what it is this government has to impart to them. If they can be made hearty for us, they may prevent a great deal of mischief, engage other Indians in our favour, and be prepared for any other service that we may think proper to employ them in.

"To do this will require great skill, and an open hand, for presents they certainly expect, and will not, at this time, be satisfied with small ones.

"The Owendaets came, on our invitation,

and such terms must therefore be offered them as will effectually engage their friendship; the matter cannot now be minced, neither with them nor the other nations. You will therefore please to consider this matter well, and give me your sentiments and counsel in this nice and critical situation of our affairs."

The assembly's answer:—

"*May it please the Governor,*

"The secretary, by a verbal message from the governor, on the twentieth of December last, acquainted the house, 'that Scaroyady's son-in-law was charged with a message from the Owendaets, to inquire what their brethren the English designed to do in regard to the late incroachments of the French; and having heard, since he came to town, that the king of England intended to send over a number of troops to assist in repelling those invaders, he was willing, if the governor thought proper, to return to his nation, and acquaint them with the joyful news; the governor, therefore, desired the opinion of the house, whether it would be most advisable for Scaroyady's son-in-law to return now to the Ohio, or go to Onondago with Scaroyady.' Whereupon the house gave for answer, that it was their opinion that it would be most proper for Scaroyady's son-in-law to return to the Ohio as soon as conveniently he could. This is all the part our house have had in relation to the Owendaets; neither did we know of the least intention of inviting them, or any others; so that as they are now come down without our knowledge or request, entirely upon the governor's invitation, it is some surprise to us to find the Indians should have reason to importune him, or that he should be at any loss to know what it is he has to impart to them on this occasion.

"Our conduct towards the Indians in our alliance has been always candid, and free from any subterfuge whatever, so that we do not understand what the governor would mean by telling us 'that the matter cannot be now minced, neither with them nor the other nations.' And we are likewise at a loss to conceive why they should expect great presents from us, who are wholly ignorant of the intention of their coming.

"The governor has been pleased to refuse his assent to our bills which had provided for Indian and other expenses, and as our treasury is exhausted by the very heavy charges for the king's service, these Indians are come among us at a very unfortunate time, when it is not in our power to supply them in the manner we are inclined to do; however we will do all that can be reasonably expected from us, and must leave the rest to be supplied by the proprietaries, whose interest is at least as much concerned as ours in engaging the affections of the Indians at this time."

The governor's rejoinder:—

"*Gentlemen,*

"If my message gave you room to think that the *Owendaets* came here on a particular invitation of mine, at this time, I have led you into a mistake. They set out from their country, as they have informed me, on the plan set forth in the minutes of council of the twentieth and twenty-fourth of December last, which were laid before you.

"The other Indians, at their request, accompanied them hither, as they were strangers; and Scaroyady says, he has some particular business to transact with this government. I have, in the name of the province, given thanks to the Owendaets for this kind visit, and to those of the Six Nations that were with our army in the late action; assured them all of the affections of the English; recommended to them to continue firm in their attachment to us; and given them room to expect some presents as a token of our regard.

"As the treasury is exhausted, I can only say, that I will readily pass a bill for striking any sum, in paper-money, the present exigency may require, provided funds are established for sinking the same in five years.

"The secretary will communicate to you what was said to the Indians yesterday, and I shall lay before you what may further pass between us, and earnestly recommend it to you, to enable me to send these people away perfectly satisfied."

In this interval also, the governor, in another written message, did his utmost to refute the arguments urged by the assembly, to justify their claim to tax the proprietary estate; but as the paper is long, and the assembly's answer to it much longer; as the dispute was again and again revived, and a thousand ways diversified; as the data already before us afford sufficient grounds for a fair decision; and as it would require the phlegm of a German to wade through all the minutenesses of it, all these pieces may be collected in an appendix, for the sake of those so fond of precision, that they cannot be satisfied unless they see the whole of a controversy together.

The assembly, however, on the very day that they received the governor's paper, prepared him to expect a full, and as they hoped, a satisfactory answer; and in order that the public business of the greatest importance might not any longer be delayed by such disputes, took leave to acquaint him, "That the bill they had sent up to him was a money-bill, granting fifty thousand pounds to the king's use, which they saw no reason to alter; that they, therefore, adhered to their bill, and desired the governor would be pleased to give his final answer, whether he would pass it or not, as it then stood?"

And upon the next, the governor signified in writing, to the assembly, "That having amended the bill for raising fifty thousand pounds, and not being yet satisfied that it was in his power or consistent with his trust, to pass it without these amendments, whatever he might be when he should hear what they proposed to say to him upon that head, he thought it necessary in answer to their message of the day before to inform them, that he did adhere to the amendments to the bill so by him made."

This message was also accompanied by another, in which the governor specifies, "That he had received a letter from colonel Dunbar in answer to the proposition he had made to him [at the instance of the assembly, should have been acknowledged] for posting part of his troops on the western frontier, signifying, that he was willing to employ them in the best manner he could, for the honour of his master and the service of the public, and enclosing the opinion of a council of war, by which he, the governor, was desired to give them a meeting at Shippensburg, where they would wait till he could join them; and that he should readily have gone thither for that purpose, had he not received another letter from governor Shirley, (in answer to one of his, requesting orders for employing the remainder of the two English regiments in protecting the frontiers of that and the neighbouring provinces) in which he said, he thought it for his majesty's service to employ those troops another way, as those provinces were populous enough to protect themselves; and therefore had sent orders to colonel Dunbar, under cover to him, to march his troops to that city; which he had [already] forwarded to him; and that as the march of these troops would leave the western frontier exposed to the French and Indians, he thought it his duty to communicate those matters to them, that they might, as soon as possible, make provision for the security of the back inhabitants, and for the subsistence of the troops during their march through the province, which might prevent great mischiefs to the people inhabiting near the road from Shippensburg to Philadelphia."

So that the march of our own troops is here discoursed of in such language as renders it doubtful for a moment, whether he is not speaking of the enemy. Governor Shirley's thoughts are immediately received as laws; governor Morris has not a thought to suggest to the contrary; it was for the king's service to leave a province, actually invaded, as the last of these governors had over and over again asserted to the assembly, exposed to the ravages of the enemy; and though provision had been at first made for having four regiments to carry on the war in these provinces, these provinces were now all at once supposed to be in a condition to cover themselves, though some of them had not yet armed a man, or beat a drum.

Out of all which, such a jumble of ideas encounter each other, and such a variety of doubts and suspicions arises, that one cannot help wondering that the assembly did not call for these several letters, and from the evidence of their own eyes, and their own understandings, form such a remonstrance, as would have displayed the whole state of things in its proper colours.

In this one instance, therefore, it may be not irrationally supposed, that their usual sagacity failed them; and this failure was no sooner discovered, than the governor came upon them with another message importing, "That his secretary would lay before them the copies of sundry petitions which had been presented to him from several parts of the province, representing their naked and defenceless condition, and praying to be enabled to defend themselves, which they were sensible was not in his power to comply with; that he would also lay before them a letter from one John Harris, giving an account of a large party of Indians actually set out from the French fort with a design to fall upon and destroy the inhabitants of this and the neighbouring provinces; that they had this piece of intelligence as he had received it; that they would form their own judgments upon it; that for his part he thought it probable; and that therefore he recommended it to them to take immediate thought about it, as the consequence would be very terrible to the inhabitants, if the account should prove true, and it could do them no injury to be upon their guard if it should prove false."

This was dated the 15th—the 16th he farther gave them to understand, "That he found, by an extract of a letter from governor Lawrence, of Nova Scotia, to lieutenant-governor Phipps, of New England, sent by governor De Lancy, of New York, to him, that the French at Louisburg were in such distress for want of provisions, that if a supply could be prevented, they might be reduced to a necessity of giving it up to us; and that, therefore, he recommended it to them to think of some proper law, that their being supplied from Pennsylvania might be more effectually prevented."

And on the 19th he again notified, "That he had received letters by express from governor Shirley, [which however he did not communicate] acquainting him, that he had wrote to colonel Dunbar, that it appeared clear to him (Shirley) as there would be four months of good weather before the winter set in, that with the number of forces the colonel then had, and the assistances he might have from Pennsylvania, Maryland, and Virginia, he might yet have it in his power, to retrieve the loss sustained in the late defeat, by pro-

ceeding to fort Du Quesne, and had sent him orders for that purpose; and that in addition to this, he had said to him, that it would depend on those several provinces to assist colonel Dunbar with reinforcements, provisions, ammunition, artillery, ordnance stores, carriages, horses, and all other things to fit him out for his march, &c. and that he had wrote to the same effect to governor Dinwiddie and governor Sharpe, whose assistance, with that of Pennsylvania, he entirely relied upon at that extraordinary crisis; that he must therefore recommend it to them, to enable him to do the several things so expected of them, to take the matter into immediate consideration, and give him their answer thereto, that he might send it forward to colonel Dunbar, and the said governors of Maryland and Virginia, whose measures would, in a great measure, depend on what he should be enabled to do."

Now general Shirley himself, in the state of his own conduct, which he has lately laid before the public, says, 1st, that colonel Dunbar did not receive any orders whatever from him till about the middle of August, at which time he had advanced far in his march to Philadelphia; and 2dly, that the orders he then sent him, were to march his troops to Albany, there to be ready to assist either in the expedition against Niagara or Crown-point as his majesty's service should require, or at least cover the country in case major-general Johnson should be defeated by the French, &c. nor does he mention one word of the assistances he expected or required of the said provinces.

The general, nevertheless, might possibly have sent such orders subsequent.

The assembly did not, however, start any scruple on this head; but, as before, took all upon content; and behaved in every respect, as if they were altogether as solicitous to tax themselves, as their proprietaries.

To render this undeniable, an instance of a very singular kind is now to be brought forward. Certain gentlemen of Philadelphia, not of the assembly, to the number of twenty, subscribed in various proportions, the sum of five hundred and two pounds, ten shillings; and made a tender of it to the house with the following proposal, to wit:

"We the subscribers observe, with great concern, that the governor and assembly differ in opinion, in respect to the taxing the proprietaries' estate; and lest by such difference in opinion the bill for raising fifty thousand pounds for his majesty's service should not take effect:

"And as the assembly, in their message to the governor, seem to be of opinion, that were the proprietaries' lands to be taxed, the sum would not exceed five hundred pounds:*

"We, rather than the least check should be given to his majesty's service at this time of imminent danger, by a matter so very trifling, do hereby promise and engage to pay five hundred pounds, money of Pennsylvania, into the public stock, for the king's use, in lieu of what the proprietaries would pay as their part of the fifty thousand pounds, were their lands to be taxed.

"And as we declare the absence of the honourable the proprietaries to be our motive for making this proposal, being well assured, that were they present it would have been altogether unnecessary; and we doubt not but they will honourably acquit every subscriber of this expense."

The house, taking it into consideration, "resolved, that such a proposal to this house is improper, as this house is destitute of the necessary information to assess any estate duly, and neither can nor ought to assess the proprietaries' estate at the sum proposed, or at any other sum whatever; and as, in case the subscribers should neglect or refuse to pay the sum subscribed, it would not be in the power of this house, not being a body incorporate, to sue them for the same. But as the house presumes that the said proposal may have arose from the subscribers' judgment of the equity of taxing the proprietaries' estate equally with all others in this province, for their common safety, ordered, that the said proposal be sent up to the governor as a further security to him, in case he should give his assent to the bill for raising fifty thousand pounds for the king's use," &c.

And having on the 19th, prepared a suitable message, sent it up together with their bill, to the governor, under a strong expression of hope, that, with this further security he would cheerfully give his assent to it.

At the same time, also, in a separate message, they further apprized him, "that they had taken his message concerning governor Shirley's orders into consideration; and that it was their opinion, his giving assent to their bill, which they earnestly requested of him, would enable him to do every thing which could be reasonably expected from them."

And that he might not serve any insidious purpose by his message concerning Louisburg, they sent him the following answer, in which they at once corrected his state of the fact, by inserting the very words of governor Lawrence's letter, and left him to answer for his deviation.

"*May it please the Governor,*

"We have considered the governor's message of the 16th instant, with the extract from

* This however was a forced construction put on the words of the assembly by those friends of the proprietary; and it appears by an act afterwards passed, that five thousand pounds, and not five hundred pounds, was looked upon and accepted as an equivalent for the proprietaries of a sixty thousand pounds tax.

governor Lawrence's letter to governor Phipps, in which it is observed, 'that if the excellent laws prohibiting the transportation of provisions to Louisburg continue in force for two months longer, there is a probability that the governor of that place will be obliged to present the keys of the garrison to Mr. Boscawen.' And our governor is pleased to recommend it to us, to think of some proper law that may most effectually prevent their being supplied from this province; but as an act passed this house, and received the governor's assent, at our last sitting, intituled, 'an act to continue an act, intituled, an act to prevent the exportation of provisions, naval or warlike stores, from this province to cape Breton, or to any other dominions of the French king, or places at present in possession of any of his subjects,' by which the act continued will be in force at least ten months to come, and has been, as far as we know, effectual for the purposes intended; and as the governor has not pointed out to us any defect in that act, nor has any occurred to us, we cannot at present think what law can be made more effectually to prevent that place being supplied with provisions, &c. from this province."

And now the period was come, when all capable of conviction, were to be convinced, that, though the governor had laboured hard to establish a belief, that the uncomplying disposition of the assembly was the only obstacle to the current of public business, the contrary was the matter of fact; and that having observed obstinacy on his side never failed to produce some concession on theirs, he had come to a resolution, to proceed in the same course of exaction, till nothing required of him by his instructions was left unperformed; that is to say, till the assembly had nothing left to part with.

The shadow of a royal instruction, so long and so often played before their eyes, was now out of the question; the governor says the province is actually invaded; that a victorious enemy is on the point of ravaging it with fire and sword; the king's troops, after having been so many ways gratified and assisted, are recalled; they are told they are to provide for their own defence; they offer fifty thousand pounds to be laid out for that purpose; the proprietary estate becomes liable to a demand, computed by his friends at about five hundred pounds, even that five hundred pounds, is offered on the behalf of the proprietaries, by a few private individuals, as an expedient to remove that only difficulty out of the way: and the governor refuses it. So that, if there was any truth in the governor's repeated assertions, the safety of the province, the interest of the public, and the honour of the British crown, were to be alike exposed and endangered, together with the proprietary estate, so impertinently and improvidently put into the scale against all the rest.

To say all at once, his answer to the last proposition, as verbally delivered to the house by his secretary, was in these words, viz.

"Sir,—The governor having by message of the 14th inst. informed you, that he did not think it consistent with his power, or trust, to pass the bill for raising fifty thousand pounds, without the amendments he had made to it, and that he adhered to those amendments; is surprised at your message of this day, to which he can only say, that he thinks it his duty to adhere still to the amendments he made to that bill."

On the same day, also, by another message he put them in mind of his former requisitions concerning a militia; and demanded a plain and categorical answer, whether they would, or would not establish one, "That his majesty and his ministers might be informed, whether, at this time of danger, the province of Pennsylvania was to be put into a posture of defence or not?"

This convinced the house, that all expedient was at an end; and that all the governor aimed at was to bewilder them if possible in another maze of controversy. To discharge themselves, therefore, of every branch of duty, as far as they were permitted to do it with any consistency to themselves, and regard to the fundamentals of their constitution, they first took into consideration the several petitions of the frontier towns, for arms, &c., and resolved, that a sum not exceeding one thousand pounds, if so much remained in the treasury at the disposition of the house by the laws in force, should be paid into the hands of a committee of the house, then named, to be by them disposed of, with the concurrence of the governor for the time being, as should appear necessary.

Proceeding then to the governor's verbal message concerning their money-bill; they agreed to return an answer to this effect, viz. "that he, having in his former answer signified, that he was not yet satisfied, &c. whatever he might be when he heard what they had farther to say, which argued a suspension of his determination, and they having since sent him a long message containing the reasons of their procedure, they could not but be surprised at his surprise, more especially as he had not even then returned their bill; that as to his proposal for striking any sum in paper-money the present exigency might require, provided funds were established for sinking the same in five years, they had no funds equal to so great a sum without the assistance of an equitable tax, to which the governor would always have his objections in favour of the proprietary estate; that as this proposal might lead them back into those disputes, which, by the form of this bill, agree-

able to the governor's advice in his speech at the opening of the session, they had studied to avoid, they should be farther surprised to receive it from him, could they find the least reason to think he was sincerely desirous of having any thing done for the defence of the province; and that being now convinced, no farther benefit could arise from their longer sitting, and being to meet of course in a few weeks to settle the accounts of the year, they took leave to acquaint him of their purpose to adjourn to the 15th of September ensuing, in case he had no objection to that time."

Lastly, by the same members that were appointed to carry up this message to the governor, they also sent another concerning a militia, in which having enumerated his several messages in relation to the defence and safety of the province, they waive the point by saying, "That the elections throughout the province being near at hand, they chose to refer that point to a future assembly, and then proceed as follows:—But as we find, by the governor's result upon our bill for granting fifty thousand pounds for the king's use, he cannot think it consistent with the trust reposed in him by the proprietaries to pass that bill, we find by experience that it can answer no good purpose to waste our time in preparing bills for his assent, in which, for the common security and defence of the province, we apprehend it would be a high breach of the trust reposed in us, to exclude the proprietaries' estate from bearing any part of the burden, and if not excluded, as the governor asserts, must at last be rejected by him for want of sufficient powers in his commission; and therefore (had we no other objections) we hope the governor will judge it reasonable, after so many repeated refusals of the bills we have offered to him for granting large sums of money for the king's use, that we now wait the determination of our superiors, what powers he has, or ought to have, as our governor, under the royal and provincial charters; and what exclusive rights our proprietaries may be justly intitled to in the laying and levying of taxes for the common security and defence of their estates, with all the other estates within this province."

In answer to the first of these messages, so far as related to the time of adjournment, (with which he was verbally acquainted by the messengers) the governor was pleased to say, "he had no objection to that time more than any other; but that if he found [on perusal of the written messages then delivered to him] that the house had not given him a satisfactory answer, to his messages relating to a militia, he should call them again immediately."

To the time of their own adjournment, they had nevertheless, the grace to be indulged with a recess. And on the third day of their sitting, they preferred a request to the governor, "that, if he had any business of importance to lay before them, particularly, if any application had been made to him for a farther supply of provisions, for the use of the king's forces then gone towards Crown-point, he would be pleased to lay it before them soon, as their year was near expired, and the time of their continuance together consequently short."

The answer they received was verbal, by his honour's secretary, importing, "that the government of Massachusetts-bay had ordered two thousand eight hundred men to be immediately raised, in addition to the one thousand five hundred before raised for the reduction of Crown-point; and that the governor had the day before received a letter from governor Phipps, desiring, at the instance of the council and assembly there, an immediate supply of provisions to be sent to Albany." And, as if this was not enough to ask of them, a supplemental paragraph was grafted upon it as follows: "the governor has also been informed, that the government of Connecticut have raised fifteen hundred men, and Rhode-Island one hundred and fifty, in addition to the forces sent by those governments against Crown-point, who will also stand in need of a supply of provisions; he therefore recommends these matters to your consideration."

Two articles, out of governor Shirley's state of his own conduct, will come in not improperly here; viz. "Upon Mr. Shirley's arrival at New York (July 4,) he found a full stop put to the preparations for the expedition against Crown-point, with respect to the articles of artillery and military stores, which the governments of Massachusetts-bay and New York had agreed to furnish between them, depending that the colonies of Connecticut, New-Hampshire, and Rhode-Island, would pay their proportions of the expense; but that not being done, the government of New York declined parting with the stores, without actual payment or security given. After having removed this obstacle to the expedition's proceeding, by putting into the hands of the government of New York, a sufficient quantity of the Pennsylvania provisions, as a security for reimbursing them on account of the before-mentioned articles, and advanced about one thousand pounds sterling, of his own money, towards the expense of transporting the artillery, and ordnance-stores, in confidence of being reimbursed by the New England colonies, he embarked for Albany."

The reader will make his own remarks; at least he will infer from what passed in the assembly of Pennsylvania before, in relation to orders said to have been received from and demands, made by general Shirley, that the said assembly would now have been inexcusable, if they had not called upon their go

vernor, for governor Phipp's letter and the other informations referred to upon this occasion; which they did by express message; and that having been told by him in answer to that call, that he had orders from the secretary of state not to lay before the house any papers but such as he pleased, they should apply to him for a sight of such orders.

They did so, and were again refused; he signifying that such orders being intended for his own government, he thought it improper to communicate them; and in the name of the secretary of state, vouching, as he himself had done before, that messages from him were a sufficient foundation for them to proceed upon; but withal recurring to what he had also offered in his former message, namely, to communicate to their speaker, or a few of the house, such parts of the information he had received from the eastward as his majesty's service required.

But this not proving satisfactory to the house, all proceedings on this head were for some days at a stand; and the interval was filled with a continuation of the animated controversy, which in the preceding session had so highly exasperated the two branches of the legislature against each other, and which never had been either revived, or caused, if the governor and his employers had not preferred their own private views, to all the moral and equitable obligations of government.

When the assembly had sat nine days, and now remained in a sort of suspense, not choosing to inflame on one hand, and willing to hope the governor would find reasons to abate of his unreasonable stiffness on the other; came down a long message by way of answer to the assembly's paper of August 19; and, sufficiently exasperated thereby, that body, now at the point of dissolution, resolved to acquit themselves with as much spirit as if they had been immortal.

To the appendix the reader must be again referred for both pieces; they cannot, they ought not to be suppressed; they are too long to be here inserted entire, and to abridge them, at least that of the assembly, would be to maim one of the most lively pieces that liberty ever inspired or controversy produced. See Appendix A.

Such a reference then to the subject matter of both as will just serve to keep us a sort of historical connexion, is all the use to be made of them in this place.

The assembly had (very truly) charged the governor with contriving all possible methods of expense to exhaust their funds and distress their affairs; and had given in proof the exorbitant demand made upon them for cutting the road for the use of the army; an enterprise which they tell him they had undertaken at his instance, on a computation of its costing only eight hundred pounds. The governor in his reply said such a sum might have been mentioned as what it would cost in some men's private opinion; but not upon an estimate of the commissioners, nor what had been as such sent to him. Adding, "that though they had numbered the making the road among their meritorious acts, they had in effect done it out of fear of having proper representations made of their conduct at home, and of an armed force being used to oblige the inhabitants to do this necessary work; that he had persuaded the general to compound for one road instead of two, to contract even that to two thirds of the breadth, and not to carry it so far by many miles as directed by the quarter-master-general; by which great savings were made to the province, and thanks instead of complaints were due to him, and rewards to the commissioners who had served the province in so hazardous a task so well; that he had never made such a demand as five thousand pounds, nor could it have been made by any one, because the accounts were not come in; and that now they were come in, the charge did not amount to three thousand pounds, which was not extravagant, considering the distance and expedition required in the work."

The assembly in their answer could not be so full in their own justification, and, consequently, in refuting the governor, as they might have been, because the necessary documents happened at that time to be mislaid. But when those documents were recovered, they did themselves ample justice, by reprinting the most material in an appendix to their minutes.

And among them was a letter from the said commissioners to the governor, which was communicated, together with one of the governor's own, (to the committee of assembly, at that extraordinary crisis, appointed to act on behalf of the whole, and other members then called in to their assistance) by his secretary; in which was the following express clause: "the expense of making the road thirty feet wide, and the principal pinches twenty, will make an expense of about eight hundred pounds." This letter was dated April 16th; and the committee having, in the name of the house, undertaken to defray the expense of both roads, the work went on accordingly. In another letter from the same commissioners, dated May 3d, it is said, "both roads will leave little of one thousand five hundred pounds, for it is impossible to tell what unexpected occurrences will arise," &c. the house, now sitting, resolved to persevere notwithstanding, and notwithstanding the loss of their bill, which made their compliance more difficult. Another estimate, dated fifteen days after this, signified, "that the expense of opening both roads would be little under two thousand pounds." Thus three estimates

had been delivered in, each exceeding the other; and after all this, when one road had been dropt, and the other reduced in the manner alleged by the governor, the said commissioners did actually require five thousand pounds to be sent to them, in addition to what had been paid to them already, which in money and provisions was supposed to be near one thousand pounds. The committee of accounts had sat upon this requisition, had pronounced it to be extravagant, and had given it as their opinion, August 8th, 1755, "that in order to prevent imposition on the public, the said commissioners ought forthwith to attend the said committee with their accounts fairly stated, with proper vouchers for the same." From all which premises, the house had surely reason to ask as they did, "whether they had not good reason to be surprised at this, and to suspect some extravagance in the management?" But they went farther still; they cited the original letter from the governor's six commissioners to him, and by him communicated to the house, August 9th, in which the five thousand pounds is specified, together with an intimation, that the people being much in want of money, the money could not be sent too soon. And they conclude this section with the following shrewd remark: "The governor's judgment of our motives to engage in this work of opening the roads, seems to us a very uncharitable one, but we hope to find more equitable judgment elsewhere. We are obliged to him, however, for owning that we did engage in it at all. For as he is pleased to lay it down as a maxim that we are very wicked people; he has shown in other instances, when we have done any good, that he thinks it no more injustice to us to deny the facts, than now to deny the goodness of our motives. He would, however, think himself ill used, if any part of his zeal in that affair was ascribed to the menaces directed to him; or to a view of accommodating by the new road the lands of the proprietaries' new purchase, and by that means increasing the value of their estate at our expense."

Again: the governor was pleased to express himself in these extraordinary terms—"You have often mentioned what you have done to promote the success of his majesty's arms under general Braddock, and for the defence of the province, and say, you have letters from the late general, thanking you for your service; the truth of this I must beg leave to question, as the late general was too honest to say one thing to you, and another to the king's ministers. He might acknowledge the services of particular men, but how you can take those to yourselves as an assembly, when you had no hand in what was done, I am at a loss to know. I think it will not be doubted, but that had you in time opened the proper roads, raised men, and provided carriages and necessary provisions for the troops, as this was the only province able in the general's situation, to furnish him with them, we might now have been in peaceable possession of fort Du Quesne."

To which astonishing, because groundless charge, the assembly, in the following full and effectual manner, replied: "We own that we have often mentioned this; but we have been forced to it by the governor's asserting, as often, in his messages, contrary to known fact, that we had done nothing, and would do nothing of that kind. But it seems we take to ourselves the services of particular men, in which the governor says, we had no hand; and adds, 'That had we in time opened the proper roads, raised men, and provided carriages, and necessary provisions for the troops, we might now have been in peaceable possession of fort Du Quesne.' We beg leave to ask the governor, has the body no share in what is done by its members? has the house no hand in what is done by its committees? has it no hand in what is done by virtue of its own resolves and orders? did we not, many weeks before the troops arrived, vote five thousand pounds for purchasing fresh victuals, and other necessaries for their use? did we not even borrow money on our own credit to purchase those provisions when the governor had rejected our bill? will the governor deny this, when he himself once charged it upon us as a crime? were not the provisions actually purchased by our committee, the full quantity required by the commissary, and carried by land to Virginia at our expense, even before they were wanted? did the army ever want provisions, till they had abandoned or destroyed them? are there not even now some scores of tons of it lying at fort Cumberland and Conegochieg? did the governor ever mention the opening of roads to us before the 18th of March, though the requisition was made to him by the quarter-master-general in January? did we not in a few days after send him up a bill to provide for the expense, which he refused? did not the governor proceed nevertheless to appoint commissioners, and engage labourers for opening the road, whom we afterwards agreed to pay out of the money we happened to have in our power? did the work ever stop a moment through any default of ours? was the road ever intended for the march of the troops to the Ohio? was it not merely to open a communication with this province, for the more convenient supplying them with provisions when they should be arrived there? did they wait in the least for this road? had they not as many men as they wanted, and many from this province? were they not more numerous than the enemy they went to oppose, even after the general had left near half his army fifty miles behind him? were not all the carriages they demanded, being one

hundred and fifty, engaged, equipt, and sent forward in a few days after the demand, and all at Wills's creek many days before the army was ready to march? with what face then of probability can the governor undertake to say, "That had we in time opened the proper roads, raised men, and provided carriages, and necessary provisions for the troops, we might now have been in peaceable possession of fort Du Quesne?"

"The governor is pleased to doubt our having such letters as we mentioned; we are therefore, in our own vindication, under a necessity of quoting to him some parts of them; and will show him the originals whenever he shall please to require it. The general's secretary, in his letter of the 10th of May to one of our members (who, in pursuance of a resolve of the house for the service of the army, waited on the general at Frederic, and there occasionally undertook the furnishing of wagons, which he performed with the assistance of some other members of the committee, and for that, and other services to the troops, received the thanks of the house at his return) says, 'You have done us great service in the execution of the business you have kindly undertaken; and indeed without it, I don't see how the service could have been carried on, as the expectations from Maryland have come to nothing.' And again, in his letter of May the fourteenth, 'The general orders me to acquaint you that he is greatly obliged to you, for the great care and readiness with which you have executed the business you undertook for him. At your request he will with pleasure discharge the servants that may have enlisted in the forces under his command, or any others for whom you may desire a discharge; and desires that you would, for that purpose, send him their names.' And again, in his letter of May the twentieth, 'I have only time to thank you once more, in the name of the general and every body concerned, for the service you have done, which has been conducted throughout with the greatest prudence and most generous spirit for the public service.' The general's own letter, dated the twenty-ninth of May, mentions and acknowledges the provisions given by the Pennsylvania assembly [though the governor will allow us to have had 'no hand' in it,] and says, 'Your regard for his majesty's service, and assistance to the present expedition, deserve my sincerest thanks,' &c. Colonel Dunbar writes, in his letter of May the thirteenth, concerning the present of refreshments, and carriage horses sent up for the subalterns, 'I am desired by all the gentlemen, whom the committee have been so good as to think of in so genteel a manner, to return them their hearty thanks.' And again, on the twenty-first of May, 'Your kind present is now all arrived, and shall be equally divided to-morrow between sir Peter Halket's subalterns and mine, which I apprehend will be agreeable to the committee's intent. This I have made known to the officers of both regiments, who unanimously desire me to return their generous benefactors their most hearty thanks, to which be pleased to add mine,' &c. And sir Peter Halket, in his of the twenty-third of May, says, 'The officers of my regiment are most sensible of the favours conferred on the subalterns by your assembly, who have made them so well-timed, and so handsome a present. At their request and desire I return their thanks, and to the acknowledgments of the officers, beg leave to add mine, which you, I hope, will do me the favour for the whole to offer to the assembly, and to assure them, that we shall on every occasion do them the justice due for so seasonable and well-judged an act of generosity.' There are more of the same kind, but these may suffice to show that we had 'some hand in what was done,' and that we did not, as the governor supposes, deviate from the truth, when, in our just and necessary vindication against his groundless, cruel, and repeated charge, 'that we had refused the proper, necessary, and timely assistance to an army sent to protect the colonies,' we alleged, 'that we had supplied that army plentifully with all they asked of us, and more than all, and had letters from the late general, and other principal officers, acknowledging our care, and thanking us cordially for our services.' If the general ever wrote differently of us to the king's ministers, it must have been while he was under the first impressions given him by the governor to our disadvantage, and before he knew us; and we think with the governor, that if he had lived, he was too honest a man, not to have retracted those mistaken accounts of us, and done us ample justice."

What is still more unlucky for the governor, his secretary writing to the said commissioners with all the authority he could depute to him, April 25, 1755, makes use of these very words, "What sir John St. Clair says is so far true, that had the army been ready now, and retarded by delays in matters undertaken by this province, all the mischiefs thence arising would have been justly chargeable on this province; but I am much mistaken, if they can within a month from this date, get their artillery so far as your road."

In the same letter he also says, "Surely the flour will be delivered in time; or great blame may be laid with truth, at the door of the commissioners." Not the province; and, indeed, the flour was actually delivered so soon and so fast, that the general had not even provided storehouses and shelters sufficient to

secure it against the weather, to which great quantities of it lay exposed in Maryland after the delivery of it there.

What spirit this gentleman (the governor) was possessed with, had been a question. The assembly would not allow him to have the spirit of government; he himself maintained, that if he had had enough of the spirit of submission, (terms generally held irreconcileable) his government would have been more agreeable to the province. But now it can be a question no longer.

The last period of the governor's message was the very quintessence of invective. "In fine, gentlemen, said he, I must remind you, that in a former message you said you were a plain people that had no joy in disputation. But let your minutes be examined for fifteen years past, not to go higher, and in them will be found more artifice, more time and money spent in frivolous controversies, more unparalleled abuses of your governors, and more undutifulness to the crown, than in all the rest of his majesty's colonies put together. And while you continue in such a temper of mind, I have very little hopes of good, either for his majesty's service, or for the defence and protection of this unfortunate country."

And in the reply of the assembly his own artillery was turned upon him as follows: "The minutes are printed, and in many hands, who may judge, on examining them, whether any abuses of governors and undutifulness to the crown are to be found in them. Controversies indeed there are too many; but as our assemblies are yearly changing, while our proprietaries, during that term, have remained the same, and have probably given their governors the same instructions, we must leave others to guess from what root it is most likely that those controversies should continually spring. As to frivolous controversies, we never had so many of them as since our present governor's administration, and all raised by himself; and we may venture to say, that during that one year, scarce yet expired, there have been more 'unparalleled abuses' of this people, and their representatives in assembly, than in all the years put together, since the settlement of the province.

"We are now to take our leave of the governor; and indeed, since he hopes no good from us, nor we from him, 'tis time we should be parted. If our constituents disapprove our conduct, a few days will give them an opportunity of changing us by a new election; and could the governor be as soon and as easily changed, Pennsylvania would, we apprehend, deserve much less the character he gives it, of an unfortunate country."

That, however, they might still continue to act on the same maxims, and continue to deserve the same confidence, they proceeded to contribute all they could to the advancement of the service; not only without the concurrence of the governor, but in spite of his endeavours to render them odious by all the means of prevention his wit, his malice, or his power could help him to. In what manner, the following unanimous resolutions will specify.

"That when application is made to this house by the governor, for something to be done at the request of another government, the letters and papers that are to be the foundation of our proceedings on such application, ought to be, as they have been by all preceding governors, laid before the house for their consideration.

"That a sight afforded to the speaker, or a few of the members, of papers remaining in the governor's hands, cannot be so satisfactory to the rest of the house, nor even to the speaker, and such members, as if those papers were laid before the house were they might receive several distinct readings, and be subject to repeated inspection and discussion till they were thoroughly understood; and all danger of mistakes and misconceptions through defect of attention, or of memory, in one or a few persons, effectually prevented.

"That great inaccuracies and want of exactness have been frequently observed by the house in the governor's manner of stating matters, laid before them in his messages; and therefore they cannot think such messages, without the papers therein referred to, are a sufficient foundation for the house to proceed upon, in an affair of moment, or that it would be prudent or safe so to do, either for themselves or their constituents.

"That though the governor may possibly have obtained orders not to lay the secretary of state's letters, in some cases, before the house, they humbly conceive and hope that letters from the neighbouring governments, in such cases as the present, cannot be included in those orders.

"That when an immediate assistance to neighbouring colonies is required of us; to interrupt or prevent our deliberations, by refusing us a sight of the request, is a proceeding extremely improper and unseasonable.

"But a member of this house producing a letter to himself from the honourable Thomas Hutchinson, Esq. a person of great distinction and weight in the government of Massachusetts-bay, and a member of the council of that province, mentioning the application to this government for provisions, and the necessity of an immediate supply; and it appearing by the resolution of the council of war, held at the carrying place, on the twenty-fourth past (an abstract of which is communicated to the speaker, by the honourable Thomas Pownal, Esq. lieutenant-governor of the Jerseys) that the army will be in want of blankets and other clothing, suitable to the approaching season;

and this house being willing to afford what assistance may be in their power, under their present unhappy circumstances of an exhausted treasury, and a total refusal by the governor of their bills for raising money, resolved,

"That a voluntary subscription of any sum or sums, not exceeding ten thousand pounds, which shall be paid by any persons into the hands of Isaac Norris, Evan Morgan, Joseph Fox, John Mifflin, Reese Meredith, and Samuel Smith of the city of Philadelphia, gentlemen, within two weeks after this date, towards the furnishing of provisions and blankets, or other warm clothing, to the troops now at or near Crown-point, on the frontiers of New York, will be of service to the crown, and acceptable to the public, and the subscribers ought to be thankfully reimbursed (with interest) by future assemblies, to whom it is accordingly by this house earnestly recommended."

And this may be called the finishing measure of this every way public-spirited assembly; the governor did not choose to be in the way to receive their reply; and so the session and the controversy for this time ended together.

Into the hands of what number of readers, or readers of what capacities, dispositions, or principles, this treatise shall fall, is out of calculation the first, and decision the last; but whatever the number may be, or however they may happen to be principled, disposed, or endowed, the majority will by this time, probably, exclaim, enough of this governor! or, enough of this author!

But whichever should happen to be the case, pardon is asked for the necessity of proceeding a few stages farther; and patience ought to be required, to induce the reader to hold out to the end of so disagreeable a journey.

Though foiled, disgraced, and silenced this anti-Penn, this undertaker to subvert the building Penn had raised, was far from quitting the lists.

On the contrary, he lay in wait with impatience for a verification of his own predictions concerning the danger of the frontier, and the miseries the inhabitants were to sustain when the enemy should break in upon them.

When such should actually become the case, when the fugitives should on all sides, be driven either by the enemy or their own fears, or both, towards the capital; when every week should furnish some new tragedy; and rumour so practised upon credulity, that every single fact should by the help of echoes and re-echoes be multiplied into twenty; when the panic should become general, and the very distractions of the herd, and their incapacity to operate for themselves, should render them obnoxious to any imposition whatsoever, then, he thought, and not altogether unjustly, their passions might be of service to him, though their reason could not; and the event will show, that, provided he might attain his ends, he could be very indifferent about the means.

Factions he had found means to form, both in the city and the several counties; and tools and implements of all kinds, from the officious magistrate down to the prostitute writer, the whispering incendiary, and avowed desperado, he was surrounded with. The press he had made an outrageous use of; a cry he had raised; and in miniature the whole game of faction was here played by him with as little reserve, though not with as much success, as it is in greater affairs elsewhere.

The current of elections, however, still continued to set against him: those who had the most interest at stake remained firm to the interest of their country; and now nothing remained but the dint of artifice and clamour, to compel those to be subservient to his indirect purposes, if possible, whom he could not deprive of their country's confidence and favour.

This was the true state of Pennsylvania, when the new assembly, composed chiefly of the old members, took their seats.

On the 14th of October the house met of course, according to their constitution; but did not proceed to material, or at least extraordinary, business. The governor was not as yet sure of his crisis; and therefore, chose to feel their pulse first in manner following:—His secretary being in conversation with the speaker of the assembly (the same who had served in that office for many years past,) took occasion to communicate two letters to him concerning Indian affairs; and the speaker, asking, whether they were not to be laid before the house; the secretary replied, he had no such orders. The letters were of course returned; and the speaker made the house acquainted with this incident; adding, "that he thought the said letters contained matters of great importance to the welfare of the province; but as he could not presume to charge his memory with the particulars, so as to lay them before the house for the foundation of their conduct, he could only mention the fact, and recommend it to the consideration of the house." The house hereupon deputed two members to inform the governor, "that having gone through the usual business done at the first sitting of an assembly, they were inclined to adjourn, unless he had any thing to lay before them, particularly in regard to Indian affairs, that might require their longer stay." And the same members were further directed to acquaint him with the time of their adjournment, in case the governor should in reply say, he had nothing to communicate. This concert upon one side, produced concert on the other. The governor replied, as had

been foreseen, "that if he had had any business to lay before the house he should have done it before that time." And being then made acquainted with the proposed time of adjournment, which was till the first of December, he said—*It was very well.*

The house, therefore, having first resolved to continue the supplies granted by the former assembly to the Indians on their frontier, adjourned accordingly, having sat but four days.

Fifteen days of this adjournment were also suffered to elapse, as if all danger and apprehension were at an end. But then the governor being armed at all points, summoned them to meet him, with all the circumstances of alarm and terror his imagination could furnish.

Intelligence (probably the same intelligence contained in the two letters communicated by his secretary to the speaker) that a party of French and Indians, to the number of fifteen hundred, as he was informed, had passed the Alleghany hills, and having penetrated as far as the Kittochtiny hills, within about eighty miles of Philadelphia, were encamped on the Susquehanna, was the business he had to impart to them: and from his manner of imparting it, he seemed more delighted than shocked with the recital. "This invasion," said he, "was what we had the greatest reason to believe would be the consequence of general Braddock's defeat, and the retreat of the regular troops." Why did they retreat then from the actual seat of war? was the wild country on the Ohio better worth defending than Pennsylvania? was any projected acquisition of more importance to the public than the preservation of such a country? did not this very governor talk of the plenty of the province and its defenceless state, from time to time, almost in the style of invitation, as if he meant to bespeak the very event he was now expatiating upon? and is not he more to be upbraided for suffering those troops to be recalled, if he did no more, without making the strongest remonstrances against it, than the assembly who besought their protection; and if it should appear from his whole conduct, that he desired nothing more ardently than that such an event should happen; and that his principal endeavour was, to improve it when it did happen to proprietary purposes, at the expense of the fortunes, liberties, and lives of the inhabitants, with what abhorrence must we reflect on the pains taken in this speech, to aggravate the calamitous state of the province, and to place it to the account of those, who had in a most signal manner deserved the thanks not only of the Pennsylvanians, but also of all the friends and lovers of liberty and virtue distributed through the British empire?

"Had my hands been sufficiently strengthened (so he proceeded) I should have put this province into such a posture of defence, as might have prevented the mischiefs that have since happened." A dose of venom apparently prepared and administered to poison the province; if the governor might have been their saviour, and was not, for want of proper powers, the assembly accused of having withheld them, were to be considered as public enemies. To be treated as such could not but follow. The populace are never so ripe for mischief as in times of most danger. A provincial dictator he wanted to be constituted; he thought this would be the surest way of carrying his point; and if the Pennsylvanians had taken so frantic a turn, they would not have been the first, who like the flock in the fable, had, in a fit of despair, taken a wolf for their shepherd.

But to return: "That the Delaware and Shawanese Indians had been gained over by the French, under the ensnaring pretence of restoring them to their country," constituted his next inflammatory. And then in order to magnify his own merits, he farther suggested "That he had sent the same intelligence, both to the king's ministers, together with a representation of the defenceless state of the province, and to the neighbouring governments, that the latter might be at once prepared to defend themselves and succour them; that the back inhabitants having, upon this occasion, behaved themselves with uncommon spirit and activity, he had given commissions to such as were willing to take them, and encouragement to all to defend themselves, till the government was enabled to protect them; but that they had complained much of want of order and discipline, as well as of arms and ammunition, and he was without power, money, or means to form them into such regular bodies, as the exigency required, &c.; that the designs of the enemy could only be conjectured from their motions and numbers; and that from those and the known circumstances of the province, it was reasonable to apprehend, they had something more in view, than barely cutting off and destroying some of the frontier settlements." And for a conclusion he summed up his lords the proprietaries' will and pleasure as follows:

"His majesty and the proprietaries having committed the people of this province to my charge and care, I have done, and still shall very readily do, every thing in my power to fulfil that important trust; and to that end, I think it my duty to call upon you to grant such supplies of money as his majesty's service, at this important and dangerous crisis, may require, and to prepare a bill for establishing a regular militia, exempting such as are conscientiously scrupulous of bearing arms, it being impossible, without such a law, though large sums of money should be raised, to prevent confusion and disorder, or conduct matters with any degree of regularity.

"As the enemy are now laying waste the country, and slaughtering the inhabitants, there is no time to be lost; I therefore think it necessary upon this occasion to inform you, that I am ready and willing to consent to a law for emitting any sum in paper-money the present service may require, if funds are established for sinking the same in five years; but I cannot think it consistent either with the powers of my commission, or the duty I owe the crown, to pass any bills of the same or a like tenor of those I have heretofore refused. And I hope you will not waste your time in offering me any such bills, as you must know from what has passed between me and the late assembly, and the information I now give you, it is not in my power to consent to; and I earnestly recommend it to you to afford in time that assistance which your bleeding country stands so much in need of."

So that in case they would not wave their privileges in the manner prescribed, and protect the proprietary estate gratis, their country might bleed to death if it would; for they were not to be permitted to make use of their own money their own way, to save it.

One act of parliament* there is, and one only, which not only admits, that governors and deputy-governors may abuse their power and oppress the subject, but also affects to provide for the punishment of such oppressors. But then the word oppression is left so vague and indefinite, that no subject ever did, or can derive any benefit from it. Of all the several species of oppression, that, now practised by this man upon a whole province, was surely the most grievous; and as it required no common share of firmness to withstand it, so it required an equal degree of prudence to temper that firmness, in such a manner as might obviate all the misconstructions and misrepresentations, the withstanders had good reason to be sure would be put upon it.

Petitions from various quarters, and many of them of such an opposite tendency that they were irreconcileable with each other, poured in upon them. Some of the petitioners declaring themselves highly sensible of the zeal and diligence the assembly had shown for the interest and welfare of their constituents, in contending for what ought in justice to be granted. Others pretending to pray, that the house would not keep up unnecessary disputes with the governor, nor by reason of their religious scruples longer neglect the defence of the province. Both requiring to have arms put into their hands. And others expressing their fervent desires that measures might be pursued consistent with their peaceable principles, and that they would continue humbly to confide in the protection of that Almighty Power, which had hitherto been as walls and bulwarks round about them.

* 11 & 12 of Will. III. cap. 12.

The assembly received all with composure, and resolved to give all the satisfaction they could to all. To the points enforced by the governor they attended first; and to take off the panic which prevailed in the province, undertook to rectify the intelligence he had given, which could not but contribute greatly to the increase of it. In their reply to that part of his speech, for instance they told him, "they could not find by the letters and papers, he had been pleased to lay before them, that any such number of French and Indians were encamped on any part of the river Susquehanna."—What they admitted was, "that the back settlers were greatly alarmed and terrified; that cruelties had been committed on the inhabitants by the Delaware and Shawanese Indians, principally within the lands purchased by the proprietaries at Albany but the year before; that, perhaps, there might be a few of the French Mohawks among them; but this was not very clear; and that these were to be followed, as several of the accounts said, by a large number of Indians and French from fort Du Quesne, with a design of dividing themselves into parties, in order to fall on the back settlements of Pennsylvania and Virginia; and that the Indians still inclined to preserve their alliance with the province, seemed on the other hand, as much terrified, lest provoked with these hostilities, the English generally should revenge upon them the barbarities so committed by the invaders; that therefore great care and judgment was, in their opinion requisite, in conducting their Indian affairs at that critical conjuncture; that as the Six Nations were in alliance with the crown of Great Britain, and numbers of them then acting with great fidelity and bravery under general Johnson, it seemed absolutely necessary on their part to make it their request to the governor to be informed, whether he knew of any disgust or injury the Delawares or Shawanese had ever received from Pennsylvania, and by what means their affections could be so alienated, as, not only to take up the hatchet against the said province, in breach of their dependence on the Six Nations, by whom they had been so long since subdued, but also of the friendly interviews and treaties, which they (the Pennsylvanians) had so repeatedly and very lately held both with them and the Six united Nations, both before and after the defection of part of the Shawanese, for whom they had particularly interposed their good offices, in procuring the liberty and sending home a number of their people, as it was apprehended, much to their satisfaction! as also, whether he had any knowledge of the inclination of the said Six Nations, or what part they had taken in relation to this cruel incursion, of the Delaware and Shawanese! they farther desired him to lay before them the Indian

treaty held at Philadelphia in the September preceding; and declared themselves disposed and resolved to do every thing in their power, if it should appear they had sustained any injury at their hand, to regain their affections, rather than by any neglect or refusal of that justice which was due both to them and all their Indian allies, entail upon themselves and their posterity the calamities of a cruel Indian war, of which they apprehended there would otherwise be but too much danger."

And the governor, the same afternoon, sending down another message, importing, "that the enemy had fallen upon the settlements at a place called the Great Cove, and slaughtered or made prisoners such of the inhabitants as could not make their escape; that those adjoining were quitting their habitations and retreating inwards; and that he must therefore most earnestly press them to strengthen his hands, and enable him speedily to draw forth the forces of the province, as any delay might be attended with the most fatal consequences;" they took the same into immediate consideration, and granted sixty thousand pounds to the king's use, to be struck in bills of credit, and sunk by a tax of six pence per pound, and ten shillings per head, yearly, for four years, laid on all the estates, real and personal, and taxables within the province; and on the fourth day afterwards sent it up to the governor for his assent, who, most unwarrantably and cruelly took advantage of the terrors which had seized upon the province, and which he himself had helped to accumulate, to reject it immediately; urging, that it was of the same kind with one he had formerly refused his assent to. And that it was not consistent either with his duty or his safety, to exceed, in matters of government, the powers of his commission, much less to do what his commission expressly prohibited." So that his own safety with regard to his bond and his commission were put into the scale against the safety of the province; and his duty to the proprietaries against his duty to the king and the public; which shows, in one word, that the whole bias of such government is eccentrical and unnatural.

His first duty was to concur with the assembly in whatever was necessary for the good and happy government of the province; the necessity of the grant in question, even for the preservation of the province, had been the burden of every one of his speeches and messages. So pressing was the extremity, so imminent the danger, so terrifying the confusion, that the least delay on the side of the assembly had been represented as productive of the most fatal consequences; and yet the smallest proprietary consideration could induce the governor to act as if he did not believe one word he had said, or had the least concern about any other consideration whatsoever.

Whether the proprietaries ought to be taxed or not he would no longer dispute. "It was sufficient for him, he said, that they had given him no power in that case; he reproached them with having sat six days, and instead of strenthening his hands in that interval, with having sent him a message, for regaining the affections of the Indians then employed in laying waste the country, and butchering the inhabitants." But then he chose to forget entirely their application to him at their first sitting, for such intelligence as they might then have proceeded to business upon, and his express declaration, when they proposed an adjournment to him, "that he had no business to impart to them." He, nevertheless, added, "that, upon the repeated accounts he had received of the miserable situation of the back counties, his council had unanimously advised him to repair thither himself, to put things in the best order possible; and that he had hitherto declined it, that he might first know what they had to propose on this occasion; but that having now received a bill from them, which they well knew he could not give his consent to, he despaired of their doing any thing, so should immediately set off for the back counties; that if the people there had not all the assistance their present distresses made necessary, it would not be for want of inclination in him, but of power; that he should take a quorum of the council with him; and that, in case they should have any bills to propose that were consistent with the duties of his station, and the just rights of government, he should readily give his consent to them whenever they were brought to him."

This menace of immediately setting off for the back counties, was also another piece of practice on the fears of the assembly; but whatever effect it had without doors, it does not appear to have had much within; on the contrary, the assembly deputed two of their members, to know his determinate resolution, "whether he would or would not pass the bill?" and in the latter case, "to desire him to return it to the house." This message was verbal; and he evaded a present reply by saying, that if the house would send him a message in writing on that head, he would return them an answer; adding, "that he should not return the said bill."

A written message was hereupon taken into consideration; but before it could be perfected, another from the governor was brought down by the secretary, importing, "that the Indians living upon the Susquehanna, amounting in all to about three hundred fighting men, had applied to him, to put the hatchet into their hands in conjunction with the provincial forces, and to be furnished with

arms, ammunition, provisions, and strong houses, for the protection of their old men, women, and children; that they had desired an explicit answer without further delay, that they might either prepare to act with the province, or provide for their own security; that they had assured him this would be the last application they should make; and that in case it did not succeed, they should leave them as an infatuated people to the mercy of their enemies; that he could not but look upon this as one of the most important matters that ever came under their consideration; as it could not be supposed these Indians would expose themselves to the fury of an enemy so superior to themselves, unless they were vigorously supported; and as a refusal would unavoidably throw them into the arms of the French; that how fatal this must prove to the inhabitants of Pennsylvania and all the English colonies, they could not be ignorant; that he was ready and desirous to do any thing consistent with his duty to the crown for the protection and assistance, as well those of their allies, as of the said inhabitants; and that upon this important affair, and at the pressing instance of these Indians, he had put off his journey to the back settlements, although he conceived his presence among them at that time to be extremely necessary."

Thus the defeat of one expedient made way for the trial of another; and what the governor's set-off could not effect, was to be re-attempted by this put-off.

The assembly, however, were equally proof against both; and having adjusted a separate answer to each, sent them up the next day, November 11, by the same messengers.

In the first they signified, "that they had come together with the sincerest disposition to avoid, if possible, all disputes whatsoever with the governor; that they were deeply affected with the distresses of the frontier country, and determined to do every thing that could be expected of them for the public safety; that they had immediately voted a large sum for the king's service, and provided a fund for sinking the whole within five years, as recommended by the governor; that as the colony had been founded on maxims of peace, as they had so long maintained an uninterrupted friendship with the natives, and as the French had already gained the Delawares * and Shawanese to their interest, they thought it was but natural for them to inquire what cause of complaint had been administered to them, and to express their readiness to do them justice, before hostilities were returned, and the breach grown wider; that for their better information, and without intending the least offence to the governor, they had applied for the last treaty; that their message to this effect was sent upon the second day after their entering upon business; and that the governor had not till then vouchsafed them an answer." Coming then to the bill, "They suggested an apprehension, that the governor's immediate refusal of it, because it was of the same kind with one he had before refused, arose from his not having allowed himself time to consider of it;" adding, "that indeed all bills for raising money were so far of the same kind; but this differed greatly from every former bill which had been offered him; that all the amendments (of any consequence) which he had proposed to the last bill he had refused, save that for totally exempting the proprietary estate, had been admitted in this; that being as desirous as the governor to avoid any dispute on that head, they had even so framed the bill, as to submit it entirely to his majesty's royal determination, whether that estate had or had not a right to such exemption; that so much time was allowed by the bill, that the king's pleasure might possibly be known even before the first assessment; that it was farther provided, that if at any time during the continuance of the act, the crown should declare the said estate exempt as aforesaid, in such case the tax, though assessed, should not be levied, or if levied should be refunded, and replaced by an additional tax on the province; that they could not conceive any thing more fair and reasonable than this, or that the governor would or could start any objection to it: since the words * in his commission, which he was pleased to suppose contained an express prohibition of his passing such a bill, did not appear to them to have any such meaning; that if it was one of the just rights of government, that the proprietary estate should not be taxed for the common defence of all estates in the province, those just rights were well understood in England, the proprietaries were on the spot to plead their own cause, or if as remote as they (the assembly) were, might safely confide in his majesty's known wisdom and justice; that the equity of their being taxed, had appeared so plain even to their best friends there, that they had entered into a voluntary subscription to pay their supposed quota for them, in full assurance,

* A pamphlet was written in Pennsylvania, and published in London, entitled, "An inquiry into the cause of the alienation of the Delaware and Shawanese Indians from the British interest," &c., wherein will be found what reason the assembly had to suspect those Indians might have been injuriously treated by the proprietaries and their agents.

* "Provided always, that nothing herein contained shall extend, or be construed to extend, to give you any power or authority to do, perform, act, suffer, acquiesce in, or consent or agree unto, any act, matter or thing whatsoever, by means or reason whereof, we, or either of us, or the heirs of us, or either of us, may be hurt, prejudiced, impeached, or incumbered, in our or their, or either of our or their royalties, jurisdictions, properties, estate, right, title or interest, of, in or to, the said province or counties, or any part of them."

that if they had been present, they would have done the same themselves, and would repay what should be so advanced for them; that if the proprietaries had any of this zeal for the service about them, this bill, if passed, would give them a happy opportunity of manifesting it, by becoming solicitors to the king for his approbation, and refusing to petition for an exemption; and that since the right of exemption contended for on their behalf, could never be settled between the governor and assembly, the bill transferred the cause thither where only it could be decided."

The residue of this piece contains so full, so noble, and so affecting a recapitulation of the whole dispute, and sets the selfish conduct of the proprietaries and their deputy in so clear a light, that leave must be taken to insert it *verbatim*.

"Our assemblies have of late had so many supply bills, and of such different kinds, rejected, on various pretences: some for not complying with obsolete occasional instructions (though other acts exactly of the same tenor had been past since those instructions, and received the royal assent;) some for being inconsistent with the supposed spirit of an act of parliament, when the act itself did not any way affect us, being made expressly for other colonies; some for being, as the governor was pleased to say, 'of an extraordinary nature,' without informing us wherein that extraordinary nature consisted; and others for disagreeing with new-discovered meanings, and forced constructions of a clause in the proprietary commission; that we are now really at a loss to divine what bill can possibly pass. The proprietary instructions are secrets to us; and we may spend much time, and much of the public money, in preparing and framing bills for supply, which, after all, must, from those instructions, prove abortive. If we are thus to be driven from bill to bill, without one solid reason afforded us; and can raise no money for the king's service, and relief or security of our country, till we fortunately hit on the only bill the governor is allowed to pass, or till we consent to make such as the governor or proprietaries direct us to make, we see little use of assemblies in this particular, and think we might as well leave it to the governor or proprietaries to make for us what supply laws they please, and save ourselves and the country the expense and trouble. All debates and all reasonings are vain, where proprietary instructions, just or unjust, right or wrong, must inviolably be observed. We have only to find out, if we can, what they are, and then submit and obey.—But surely the proprietaries' conduct, whether, as fathers of their country, or subjects to their king, must appear extraordinary, when it is considered that they have not only formally refused to bear any part of our yearly heavy expenses in cultivating and maintaining friendship with the Indians, though they reap such immense advantages by that friendship; but that they now, by their lieutenant, refuse to contribute any part towards resisting an invasion of the king's colony committed to their care; or to submit their claim of exemption to the decision of their sovereign.

"In fine, we have the most sensible concern for the poor distressed inhabitants of the frontiers. We have taken every step in our power, consistent with the just rights of the freemen of Pennsylvania, for their relief, and we have reason to believe, that in the midst of their distresses they themselves do not wish us to go farther. *Those who would give up essential liberty, to purchase a little temporary safety, deserve neither liberty nor safety.* Such as were inclined to defend themselves, but unable to purchase arms and ammunition, have, as we are informed, been supplied with both, as far as arms could be procured, out of monies given by the last assembly for the king's use; and the large supply of money offered by this bill, might enable the governor to do every thing else that should be judged necessary for their further security, if he shall think fit to accept it. Whether he could, as he supposes, "if his hands had been properly strengthened, have put the province into such a posture of defence, as might have prevented the present mischiefs," seems to us uncertain; since late experience in our neighbouring colony of Virginia (which had every advantage for that purpose that could be desired) shows clearly, that it is next to impossible to guard effectually an extended frontier, settled by scattered single families at two or three miles distance, so as to secure them from the insidious attacks of small parties of skulking murderers; but thus much is certain, that by refusing our bills from time to time, by which great sums were seasonably offered, he has rejected all the strength that money could afford him; and if his hands are still weak or unable, he ought only to blame himself, or those who have tied them.

"If the governor proceeds on his journey, and takes a quorum of his council with him, we hope, since he retains our bill, that it will be seriously and duly considered by them; and that the same regard for the public welfare which induced them unanimously to advise his intended journey, will induce them as unanimously to advise his assent. We agree, therefore, to his keeping the bill, earnestly requesting he would reconsider it attentively; and shall be ready at any time to meet him for the purpose of enacting it into a law."

There is not in any volume, the sacred writings excepted, a passage to be found better worth the veneration of freemen, than this, "those who would give up essential

nberty, to purchase a little temporary safety, deserve neither liberty nor safety;" nor could a lesson of more utility have been laid at that crisis before the Pennsylvanians.

And as to the other message of the assembly, which was sent up together with this, it was so solid and concise that it will not bear an abridgment.

"*May it please the Governor,*

"We have considered the governor's message of yesterday, relating to the application and pressing instances of the Indians, and are glad to find, that he is at length prevailed on to declare himself ready and desirous to do any thing, consistent with his duty to the crown, for the protection and assistance, as well of our allies, as of the inhabitants of this province in general." We never have, and we hope never shall, desire him to do any thing inconsistent with that duty. He has it now in his power to do what he may think the exigence requires, for the service of the crown, the protection of our allies, and of the inhabitants of the province. As captain-general, he has, by the royal charter, full authority to raise men; and the bill now in his hands, granting sixty thousand pounds, will enable him to pay the expenses. We grant the money cheerfully, though the tax to sink it will be a heavy one; and we hope the bill will receive his assent immediately."

With both, a bill was sent up, for supplying the western and northern Indians, friends and allies of Great Britain, with goods at more easy rates, supporting an agent, or agents among them, and preventing abuses in the Indian trade, to which the governor's assent was desired.

The governor's answer was, "that he would take the same into consideration, and give it all the despatch in his power." But whatever he was pleased to say, both his head and his heart were at this time taken up with other purposes; how just in themselves, how agreeable to his commission, and how salutary to the province, the sequel will most properly explain.

In the cause of this long and manifold controversy, the proceedings of parliament had been frequently referred to; and the rights of the house of commons as frequently urged by way of sanction for the claims of the assembly. And now the proprietary-party or governor's-men, (for wherever there is influence, there such creatures will always be found) being desirous also in their turn, to avail themselves of their reading, had recourse, it may be presumed, to the famous Kentish petition in the year 1701, as a proper precedent for them to proceed upon, in hectoring the assembly into such measures as they could not be prevailed upon to adopt by any other means.

Willing, however, to give their copy the air of an original, they chose to represent to their representatives rather than to petition; and whereas the Kentish petition humbly implored, these came with a positive and immediate demand.

The mayor of Philadelphia took the lead in this turbulent transaction, and found one hundred and thirty-three inconsiderates, to follow him, under the name of several of the principal inhabitants of that city.

To the assembly it was presented, the very day after the two messages, just recited, were left with the governor, "at a time when a bold and barbarous enemy has advanced within about one hundred miles of this metropolis, [the governor had said eighty] carrying murder and desolation along with them;" (thus pompously it began,) "we should think ourselves greatly wanting, &c. if we did not thus publicly join our names to the number of those who are requesting you to pass a law in order to put the province into a posture of defence," &c.

A militia by law is the measure they afterwards contend for; and to show how men differ from themselves according to circumstances and situations, the government-doctrine here was, "that the proper and natural force of every country was its militia; without which no government could ever subsist itself, that no sums of money however great could answer the purposes of defence without such a law," &c.

And it was in these very words, they had the temerity to enforce their point.

"We hope we shall always be enabled to preserve that respect to you, which we would willingly pay to those who are the faithful representatives of the freemen of this province. But, on the present occasion, you will forgive us, gentlemen, if we assume characters something higher than that of humble suitors, praying for the defence of our lives and properties, as a mattter of grace and favour on your side; you will permit us to make a positive and immediate demand of it, as a matter of perfect and unalienable right on our own parts, both by the laws of God and man."

As also, again afterwards.

"Upon the whole, gentlemen, we must be permitted to repeat our demand, that you will immediately frame and offer a law for the defence of the province, in such a manner as the present exigency requires. The time does not permit many hands to be put to this representation; but if numbers are necessary, we trust we shall neither want a sufficient number of hands nor hearts, to support and second us, till we finally obtain such a reasonable demand."

To a committee it was referred, together with the address from certain of the people called quakers, (recommending peaceable measures, and insinuating, that otherwise many as well as themselves would be under a

necessity to suffer rather than to pay) and that concerning unnecessary disputes with the governor, as containing sundry matters of an extraordinary nature, for consideration; and in the mean time, the house plyed the governor with message after message, concerning the bill for regulating their Indian trade, and that for the supply. Both parties apparently wanted to gain time. It was equally dangerous for the assembly to provoke or parley with a multitude; and nothing but new matter from the frontier could give the governor any new advantage over them.

His answer to the assembly on the 14th of November was, "That he had given the bill relating to the Indian trade to his clerk to transcribe;" and that, as to the other, "He was then reconsidering it according to the request of the house; and when he came to any resolution upon it, the house might expect his final answer; but he did not know when that would be."

At last, on the 17th, that is to say, after having been again quickened by another message, he sent down the latter with a paper of amendments, and a written message different both in matter and manner from, but altogether as illusory as the former. For, having maintained, as before, that he was not authorized by his commission to pass such a bill, and yet agreed with the assembly, that their dispute must, in the end, be determined by his majesty, he changed his objection from the thing to the mode, which he argued was unprecedented, and, in effect, impracticable: for, he said, "The king could not properly give his assent to some parts of an act and reject others; and he then suggested another expedient, namely, for the house to adopt his own amendments sent down with the bill, by which the proprietary estate was entirely exempted; and to prepare and pass another bill, whereby the said estate was to be taxed in the same proportion with every other estate, only not by assessors chosen by the people, but by commissioners reciprocally chosen by himself and the assembly, and also named in the bill; together with a suspending clause, that the same should not take effect till it had received his majesty's approbation. All was closed with a sort of protestation, that nothing but an implicit confidence in his majesty's goodness and justice, that he would disapprove it if it was wrong, and his own most sincere and ardent desire of doing every thing in his power for the good and security of the people committed to his care, could have induced him to pass a law in any shape for taxing the said estate; and a predecision, that if they were equally sincere and equally affected with the distresses and miseries of their bleeding country, they could have no objection to this method of affording immediate succour and relief."

What the doctrine was, established in the province, concerning suspending clauses, is already before the reader, and consequently the inference, in case the assembly had been weak enough to swallow the bait thus hung out for them.—But they were neither to be so amused by him, nor so terrified by his allies without doors, as either to forego the use of their understandings, or to act with their eyes open as if they had no eyes at all.

Having, therefore, sufficiently canvassed the matter, they first resolved, that they would adhere to their bill without admitting any of the governor's proposed amendments; and then, to make him sensible, that they also had some artillery to ply, as well as he, they farther resolved, "That, in case the governor should persist in refusing his assent to their bill, which was so just and equitable in its nature, and so absolutely necessary at that time for the welfare of the British interest in America, after he should receive the answer of the house to his message then under consideration, they would make their appeal to the throne by remonstrance, humbly beseeching his majesty to cause their present governor to be removed, or take such other measures as might prevent the fatal consequences likely to ensue from his conduct."

This vote was unanimous: and they farther took notice in their minutes of some dissatisfaction expressed at an Indian treaty held in the year 1753, by one of the chiefs of the Shawanese, and some promise made to him on the behalf of the proprietaries, which had not been complied with.

The governor, on the other hand, sent down the secretary with intelligence of another massacre committed by the Indians at a place called Tulpehocken; and in a written message farther observed on the supply bill, he had returned, "that no money could be issued in virtue of it till the next January; before which the greatest part of the province might be laid waste, and the people destroyed or driven from their habitations; thence proceeded to demand an immediate supply of money; and concluded with a signification, that, should they enable him to raise money on the present occasion, a law founded on the act of parliament for punishing mutiny and desertion, would be absolutely necessary for the government of them, when not joined with his majesty's regular troops."

This was no sooner read than the house adjusted their answer to his former message, in which "They maintained the propriety of their bill in point of mode as well as matter: that conditional or alternative clauses were far from being unprecedented; that the act was so constructed as to be complete either way; that, on the contrary, in pursuing the other method recommended, of passing two bills diametrically contradictory to each other,

n the same breath, they might be justly charged with doing what would be not only unprecedented and absurd, but what would infallibly secure the end aimed at by the governor, to wit, exempting the proprietaries from taxation; that as to the expedient of assessing the proprietary estate by commissioners instead of assessors, they did not see the necessity of it; that the lords of parliament had, in the year 1692, proposed a like amendment to a money-bill, but finding it could not be carried, had dropped it then, and never revived it since; that it was one of the most valuable rights of British subjects to have their money-bills accepted without amendments, a right not to be given up without destroying the constitution, and incurring greater and more lasting mischiefs than the grant of money can prevent; that of the twenty amendments offered by the governor to the fifty thousand pounds bill of the last assembly, the present assembly had admitted every one of them that was of any consequence into the present bill, merely for the sake of avoiding all dispute, except that of exempting the proprietary estate; and even that had been so modified as they imagined no objection could remain; that they found, however, in this instance, how endless it was to admit such changes: seeing the governor now wanted to amend his own amendments, add to his own additions, and alter his own alterations; so that, though they should now accede to these, they could not be sure of being ever the nearer to a conclusion; that, as the passing the proposed separate bill was equally inconsistent with the governor's construction of the prohibitory clause in his commission, which he seemed now to have got over; so they hoped he would not, for the sake of a mere opinion, concerning mode and propriety, any longer refuse a bill of so great importance to his majesty's service, and even the proprietary estate, going daily to ruin, as well as the relief of the province; and that the same implicit confidence in his majesty's goodness, which induced him to pass such a bill in any shape, might also encourage him to believe, that any little impropriety, if any there was, would be graciously passed over; that, if there could be any doubts, which was most affected with the miseries of the province; they, who were most of them natives of it, and who had all of them their estates there, or he, a stranger among them; a consideration of the many bills they had offered in vain for its relief, and their earnest endeavours to give such great sums to that end, would solve them all; and that, upon the whole, the house adhered to their bill without amendments; because it was a money-bill; because the whole sum was granted to the crown, and to be paid out of the pockets of the subject; and because it was in their judgments a reasonable one. Lastly, they made it their request, that since, at such a time as that, disputes and contentions between different parts of the government could not but be extremely prejudicial both to the king's service and the welfare of the country, they might be thenceforth laid aside; and that the governor, by passing this just and equitable bill, would lay the foundation of such an agreement as might conduce to the general benefit of all concerned, and prevent the necessity they should otherwise be under, of making an immediate application and complaint against him to their sovereign."

They accompanied this message with certain extracts from the journals of parliament, concerning the claims of the lords and the perseverance of the commons in rejecting them; they also, in a separate message, applied for information concerning the Shawanese affair before-mentioned; and in a farther message they apprized him, "That their treasury was quite exhausted by the heavy expenses lately incurred, and that they knew of no way of raising money so expeditiously as that proposed by the bill then before the governor." After which they subjoined the following expressions, "It is true, the money intended to be struck, may not be current before the thirty-first of December; but as that is not more than six weeks, there is no doubt but that labour, service, and any thing else that money can purchase among us, may be had on credit for so short a time, if the bill passes; and in consideration of the necessity of affording timely assistance to the distressed inhabitants in the back counties, we sincerely hope, and once more earnestly entreat, that the governor will no longer refuse or delay his assent to it."

At this time the house had a militia bill under their consideration, framed in compliance with the request of sundry petitions they had received, setting forth, "that the petitioners were very willing to defend themselves and country, and desirous of being formed into regular bodies for that purpose, under proper officers, with legal authority:" the bill therefore was, as the title expressed, "for the better ordering and regulating such as are willing and desirous of being united for military purposes." It gave these the powers they desired, without compelling others who might be conscientiously against bearing arms. In which respect it conformed with the governor's particular recommendation often repeated.

This bill was sent up to him on the twenty-first; and, at the same time, the house called upon him for his result on the bills already before him.

Nothing is more true, than, that the more clearly and unanswerably you convince a man that he is in the wrong, the more you exas-

perate him against you; and never was any truth more strongly illustrated than this appears to have been in the person of this high and mighty governor. He could not forgive the assembly, because they had put him out of conceit with himself: and the poorer he found himself in arguments, the more strongly his passions excited him to make use of invectives. Invective became his only resource then; and the little power he had over himself, yet farther showed how unfit he was to be a governor.

Having pronounced his proposal to the assembly to be a reasonable one, and declared himself no less astonished than grieved, that they should reject it; and, more especially, as their best argument for so doing was founded on a new and lofty claim of privilege, he endeavours both to prove the novelty and account for the assumption of it, by saying, "It had never been heard of, till towards the close of Mr. Hamilton's administration, and that the assembly being then pressed on the subject of defence, first introduced and have since continued their claim: either wholly to avoid giving money for warlike purposes, or to arrogate unwarrantable powers to themselves." To certain extracts from the minutes of the council, sent together with this message to them, he then referred for his proofs, that the governor's right to amend money-bills was never till then questioned; and after upbraiding them, in his way, for risking the rejection of so important an act, on account of the proprietary exemption, resolved all their reason for adhering to what he called, the indirect and perplexed method of their bill, into their sovereign pleasure to have it so. The same paragraph contained also some strange insinuations, "That, not daring to trust their cause on its own bottom, they had chosen to blend both bills together, that they might have a better chance of having their chief governor and his estate subjected to their mercy." And what with his implicit confidence, that the crown, in the common method, would neither pass that or any other law for the sake of the greatest sums, if the proprietary claim to an exemption was just in itself; and what with his foresight of manifest inconveniences that might ensue from a total rejection thereof (which he himself had nevertheless persevered in doing.) The next paragraph is hardly to be deciphered at all, except that in the close of it, he attempts to justify his own uncommon method, by saying, "he had separated the two parts of the bill, that the province might be served either way; [which the assembly had been altogether as provident of before.] Any absurdity in this method he professed himself unable to discover; and the good-natured construction put upon it by them, of his intending to secure an infallible exemption to the proprietary estate thereby, he said he should leave among the rest of the groundless charges against him." Condescend he did, however, to offer one amendment more, which, according to him, was to reconcile all: namely, by the addition of the following words to the exemption clause proposed to be added to the first bill, to wit: "The estates of the honourable Thomas Penn and Richard Penn, esquires, excepted; which shall be taxed in the manner directed by a particular law, passed or to be passed for that purpose." Not willing, however, to rest the controversy here, he proceeded to declare, "that their extracts from the journals of parliament proved nothing to the purpose for which they were quoted; the constitution of England and the constitution of Pennsylvania being no way similar; that how many soever of his former amendments they had admitted, their leaving out the most material one, made the proposal of a separate bill a necessary expedient: so that they had no reason for bursting out into such a lofty strain of rhetoric concerning his amending his amendments, &c. That as to the number of money bills he had rejected, they were but five in all, and all rejected for sufficient reasons, [such as we have seen!] and that, if they were disposed to relieve their country, they had many other ways, to which he should have no objection." Proceeding then to the personal topic, and his being treated as a stranger, he takes a retrospect of their conduct, with an intent to show, that they had treated Mr. Hamilton, though a native, with as many abuses as they had treated him; and here occurs a paragraph or two which must be inserted verbatim, viz.

"And here, was I inclined to go beyond my own times, I might begin with reminding you how contemptuously you treated the proprietary offer of four hundred pounds, for erecting a place of strength on the Ohio, together with an offer of one hundred pounds per annum towards its support; which offers were made at a time when your concurrence would probably have prevented many of the calamities we now groan under.

"I might also observe, that when Mr. Hamilton first called upon you, pursuant to his majesty's orders, to grant such supplies as would enable him to draw forth the strength of the province, and to repel force by force, you would not admit that the French encroachments and fortifications on the Ohio were within our limits, or his majesty's dominions; thereby seeking an excuse to avoid doing what was required of you."

He had also the disingenuity to mention the late defeat of his majesty's forces, in express terms as having happened, "for want of that timely support and assistance which it was in the power of the province to have afforded." And having again declared, that he could not

recede from his amendments, and expressed his satisfaction at their intended complaint against him, he concluded with the two following paragraphs, which are equally insidious, injurious, and unbecoming.

"Upon the whole, it appears clear to me, that you never intended that any of your bills should pass for raising money to defend the province; and this seems now to be placed beyond all dispute, since those people, under whose influence you are chiefly known to be, are said to have declared publicly to you, that they would sooner suffer than pay towards such purposes.

"However, I shall put one proof more, both of your sincerity and mine, in our professions of regard for the public, by offering to agree to any bill, in the present exigency, which it is consistent with my duty to pass, lest, before our present disputes can be brought to an issue, we should neither have a privilege to dispute about, nor a country to dispute in."

Together with this message, the secretary also brought down another altogether as extraordinary, in which the governor acquaints the house, "that he had considered their bill, for the better ordering and regulating such as were willing and desirous to be united for military purposes within that province; and though there were many things in it of a very extraordinary nature, and that he was convinced it would never answer the purpose of defending the province, even if it could be carried into execution, in any reasonable time, which he was afraid it could not, yet, to show he was desirous of doing any thing that had even a chance of contributing to the safety of the province, he should consent to it in the shape they had sent it, as it would be entering into new disputes, should he amend it properly."

And what is, perhaps, more extraordinary still, the governor on the same day, namely, Saturday, November 22, received some despatches from the proprietaries, the contents of which he did not communicate to the house till the Monday following; by which time he was ready to unmask such a variety of batteries, as he thought would be sufficient, by their very noise alone, so to intimidate his antagonists at least, that they should not presume to make him such a return to his last message as they had done to his former.

The first was a report from his council, containing such a discussion of Indian affairs as was to be taken for a discharge in full of the Shawanese complaints mentioned in a message from the assembly, at their first sitting, in consequence of the governor's summons.

The second was a call upon them to provide for a swarm of French inhabitants banished out of Nova Scotia by governor Lawrence, and sent at a venture to be distributed through the rest of his majesty's colonies along the continent.

And the third not only notified the receipt of the proprietaries' despatches above-mentioned, but farther specified, "That, such was their care and regard for the people, that they had no sooner received the account he had sent them of general Braddock's defeat, than they sent him an order upon their receiver-general for five thousand pounds, as a free gift to the public, to be applied to such uses as that event might make necessary for the common security of the province; that he had directed the said receiver-general to have the money ready as soon as possible; and that it should be paid by such persons as should be appointed by act of assembly for the disposition of any sum they might think necessary for the defence of the province in that time of danger." Two other clauses were also added: one importing, "That this timely and generous instance of the proprietaries' care and anxiety for the inhabitants, could not fail making the most lasting impression upon the minds of every well-wisher to that country;" and the other, "That the governor upon that occasion again recommended it to them to lay aside all disputes, and to grant such supplies in addition to what the proprietaries had given, as his majesty's service and the pressing exigencies of the province required."

That they might not, however, have any merit to plead on either of these heads, but might seem to be driven by force into every such measure as was thus recommended, on the very next day after this, and before it was possible for them to come properly to any resolutions at all; came again the mayor of Philadelphia, having now also prevailed with his corporation to join him and his prompters, with a remonstrance, in a style altogether dictatorial, "reproaching them with loosing their time in deliberations, while their fellow-subjects were exposed to slaughter, and in debates about privileges while they were deprived of the great first privilege of self-preservation, and requiring them to postpone all disputes, grant necessary supplies, and pass a reasonable law for establishing a militia; and in the close of it, recommending despatch, as the people seemed already in a deplorable and desperate state, and they feared it would not be possible to preserve the peace and quiet of the city, or of the province itself, much longer."

The house, notwithstanding, to be consistent in all things, called, in the first place, upon their committee for the answer they were directed to prepare to the governor's last invective, which was ready, and in substance as follows; to wit,

"That if they could be astonished at any thing which came from their governor, they should be astonished at his repeating charges

and calumnies, groundless in themselves, and so repeatedly, fully, and publicly refuted; that instead of refuting them, therefore, they should only refer to their former refutations; that what he says concerning the risk of losing so important an act was mere sophistry and amusement; that, as they had before asserted, conditional or alternative clauses were common; that in the same act there was another, namely, that in case the four year tax did not produce sixty thousand pounds, the defect should be supplied by an additional tax; and, if it exceeded, the overplus should be disposed by a future act; to which the governor had made no objection; that, notwithstanding all the dust he had attempted to raise, it was therefore clear to them, that the bill was entirely unobjectionable; that their mode was more proper than his, and as safe both for the bill, and the pretended rights of the proprietary; that his commission had no such prohibition as he affected to find in it; and that they could not, in a money-bill like this, admit of amendments not founded in reason, justice, or equity, but in the arbitrary pleasure of a governor, without betraying the trust reposed in them by their constituents, and giving up their just rights as free-born subjects of England; that by the charters their constitution was founded upon, in addition to the privileges therein specially named, thy are moreover entitled to all other powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the king's plantations in America; that the free-born subjects of England had a right to grant their own money their own way, the governor did not deny, nor that the same was usual in other plantations; that therefore they had the same right, and should have had it if it had not been so specified in their charter; such free-born subjects, instead of losing any of their essential rights, by removing into the king's plantations, and extending the British dominions at the hazard of their lives and fortunes; being, on the contrary, indulged with particular privileges for their encouragement in so useful and meritorious an undertaking; that indeed their constitution was, in one respect, no way similar to that of England, namely, the king's having a natural connexion with his people, the crown descending to his posterity, and his own power and security waxing and waning with the prosperity of his people; whereas plantation-governors were frequently transient persons, of broken fortunes, greedy of money, destitute of all concern for those they governed, often their enemies, and endeavouring not only to oppress but defame them, and thereby render them obnoxious to their sovereign, and odious to their fellow-subjects; that their present governor not only denied them the privileges of an English constitution, but had endeavoured to introduce a French one, by reducing their assemblies to the insignificance to which the French parliaments had been reduced; had required them to defend their country, and then put it out of their power, unless they would first part with some of the essentials which made it worth defending, which was in fact reducing them to an Egyptian constitution: for, that as the Egyptians were to perish by famine unless they became servants to Pharaoh, so were they by the sword, unless they also became servants to an absolute lord, or as he was pleased to style himself, absolute proprietary; that all comparisons made by the governor of himself to his immediate predecessor would be to his own disadvantage, the differences between the former gentleman and his assemblies having been but small, in comparison with those then subsisting, and conducted by him with some tenderness to his country; that how much soever the people were at that time dissatisfied with some particulars in his administration, the present had given them abundant reason to regret the change; that as to the collusion charged upon them, in not intending any of the bills they had offered for the defence of their country should pass, they could, with humble confidence, appeal to the searcher of all hearts, that their intentions perfectly corresponded with their actions; that, not to mention the unfairness of ascribing to a whole people the indiscretion of a few, [those who had declared they would suffer rather than pay for military measures] the governor himself must own, they could not be under the influence he supposed, when they assured him that several more votes had been given for those measures since they were petitioned against, than before; that they were totally ignorant of the many other ways of raising money, to which the governor had no objection; as also, what that other bill might be, which he might think consistent with his duty to pass; that he thought it inconsistent with his duty to pass any bills contrary to his instructions from the proprietaries, which (like the instructions of the president and council of the north, mentioned by lord Coke, 4 inst. p. 246,) were to them impenetrable secrets; that, according to the same great lawyer's remark on governing by such insructions, *misera est servitus ubi jus est vagum aut incognitum*; that, therefore, it would be in vain for them to search for other ways, or frame other bills; and that here the matter must rest till his majesty should be graciously pleased to relieve them; since, with the governor, they could no otherwise hope to end their unhappy divisions, than by submitting to one part or the other of the miserable alternative mentioned by him; either not to have a privilege worth disputing about, or be deprived of a country to dispute it in."

But though this answer was, in every particular, conformable to the sense of the house, and was afterwards printed in the appendix to their proceedings, they declined making use of it; and that for the present reported by the committee was to the effect following: to wit, "that the bulk of the governor's long message consisted of groundless charges and calumnies, which having been repeatedly refuted, might be safely left to themselves; that though they had prepared a full answer to the rest, yet as there were now some hopes of an agreement with him in the money-bill, which was the principal business of the session, they submitted it to the house, whether it would not be more consistent with their prudence and moderation to suppress it; that there being, however, one or two new charges brought against the assemblies of that province, it might be proper to take some notice of them; that the first of these was, that they contemptuously treated the proprietary offer of four hundred pounds, for erecting a place of strength on the Ohio, and of one hundred pounds per annum towards its support; that this contemptuous treatment was not specified, but might be explained, by a passage out of the *Brief State*, [a proprietary pamphlet] where it is said, "the house refused this proposal a place in their minutes;" that the fact was, however, otherwise; that the said proposal appears in several pages there specified; and that nothing farther than what is there, could properly be made a part of those records; and the reason thereof is then assigned in the following narrative; which, for various reasons, deserves to be made a part of this discourse.

"The late governor Hamilton, after sending the message of the thirteenth of August, 1751, requested a private meeting with some of the members of that house, but without any authority from the assembly.

"At this meeting governor Hamilton offered, on behalf of the proprietaries, four hundred pounds, towards building such a house upon or near the Ohio, (but not a syllable of maintaining or supporting it.) The Indians were so far from pressing our engaging in it, that instructions were drawn by this government to require it of them, at a treaty held by G. Croghan, in May, 1751, and they evidently showed themselves apprehensive, such an attempt might give umbrage to the French, and bring them down the Ohio with an armed force, to take possession of those lands. And about two years afterwards, these very Ohio Indians, at the treaty held at Carlisle, in October, 1753, say to our government, 'I desire you would hear and take notice of what I am about to say; the governor of Virginia desired leave to build a strong house in Ohio, which came to the ears of the governor of Canada, and we suppose this caused him to invade our country.' Treaty, page 8. The same sentiments appeared among the Six Nations, at the Albany treaty; 'that the English and French were only contending which of them should have their lands.' The reasoning made use of by the members at this private conference with the late governor was, that the land were they proposed to build it was claimed by the crown, and was very probably beyond the limits of Pennsylvania; that at least it would be beyond the reach of our laws, as appeared by the people already settled on Juniata, just beyond the North mountain; that this, instead of healing, might create irreconcileable breaches with our Indians, considering what sort of people would probably reside there; that the Indians had never heartily requested it, nor did it seem to be their interest so to do; and if they had requested it, as they were in subjection to the Six Nations, it would be necessary to have their assent; that this precipitate act would probably create a jealousy in the French, and give them some pretence of an infraction of the treaty of Utrecht on our part, and might finally engage the British nation in a war with France. These, and many other reasons, were urged at that private conference, as several of those members apprehended, to governor Hamilton's satisfaction. And it appears by George Croghan's journal, that those Indians neither did, nor did they think they could, give leave to build a house on the Ohio, without the express consent of the Six Nations; and accordingly they took two months to acquaint the Onondago council with this transaction, and then to send us word, which they never complied with.

"It appears further, by the assembly's message to governor Hamilton, on the twenty-first of August, 1751, taken from the informations of Conrad Weiser, and Andrew Montour, 'that the request inserted in George Croghan's journal as made by the Indians at Ohio to this government, to erect a strong trading house in their country, as well as the danger 'tis there said they apprehended from the attempts of the French, was misunderstood, or misrepresented by the person, the governor confided in for the management of that treaty.' But it may be unnecessary to pursue this inquiry into an affair wherein George Croghan thought himself unkindly, if not unjustly, sacrificed to private ends, as is well known to such as were acquainted with this affair, and appears in the letters and other papers sent by himself to some of the members of that assembly."

Coming then to the other new charge, namely, that the assembly would not admit, that the French encroachments were within the king's dominions, they maintain that this charge is as ill-founded as the other; "For, say they, though the house never took upon

them to ascertain the bounds of the king's dominions, they never directly or indirectly denied those encroachments to be within them." They then proceeded to examine the extracts from the council minutes sent by the governor, in proof that money-bills had been amended by former governors. They demonstrated in ten several instances, those extracts had not been fairly represented. And they concluded in these words: "were all these to be deducted from the list, it would appear that there are but few instances in our journals of proper money-bills amended by the governor, and the amendments agreed to by the house; this is no more than was acknowledged by the preceding assembly, in their message of the 29th of September, where they say, that in a very few instances their predecessors might have waved that right on particular occasions, but had never given it up."

Scarce had the house agreed with their committee in laying aside, for the present, the first of these answers, for the reasons assigned in the second, than certain inhabitants of Philadelphia, joined with others of the county of Chester, in all twenty-nine persons, thought themselves at liberty to assail the house in person with a petition, desiring, that the governor and the house would unite in the fear of God, &c. And as the minute taken of this strange incident (which followed the Philadelphia remonstrance in much such a manner as the legion-letter followed the Kentish petition before referred to) will serve at once to show the ferment which then prevailed in the province, and yet how far the people in general were from desiring to be preserved against the incursions of the enemies, at the expense of their constitutional liberties; it is here inserted, to wit:

"The speaker told them, that it was well known this house was composed of members chosen without any solicitation on their parts, to be the representatives of the people, and guardians of their liberties; that the whole powers the house were invested with, were derived from the people themselves, and that as the house had hitherto, so they should still continue to discharge the high trust reposed in them to the best of their understanding and abilities; and then asked them, whether they desired that the house should give up any rights, which, in the opinion of the house, the people were justly entitled to? some of the petitioners, in behalf of the whole, answered, no; they were far from requiring any thing of that kind; all they wanted was, that some expedient might be fallen upon, if possible, to accommodate matters in such a manner, as that the province might be relieved from its present unhappy situation. To this the speaker replied, that nothing could be more agreeable to this house than a harmony between the two branches of the legislature; and that as the governor had yesterday evening sent down a message, intimating that the proprietaries are now disposed to contribute a sum of money towards the common security of the province, there was a great probability that all controversies on that head were at an end, and that some method would be speedily taken for relieving the province from its present difficulties."

In effect, the governor having given his consent to the militia bill, and the house having made some immediate provision, for landing and relieving the miserable French exiles obtruded upon them from Nova Scotia, they proceeded to resolve, first, unanimously,

"That the right of granting supplies to the crown in this province, is alone in the representatives of the freemen met in assembly, being essential to an English constitution. And the limitation of all such grants, as to the matter, manner, measure, and time, is in them only." And then,

"That in consideration of the governor's message of yesterday, by which it appears that the proprietaries have sent him an order on the receiver-general for five thousand pounds, to be paid into the hands of such persons as shall be appointed by act of assembly, and applied with such sums as the assembly should grant, to such uses as may be necessary for the common security of the province; and as it would not be reasonable or just, at this time, to tax the proprietary estate, in order to raise money therefrom, over and above the said grant from the proprietaries, the house will immediately proceed to form a new bill for granting a sum of money to the use of the crown, and therein omit the taxation of the said estate."

Accordingly, such a bill was ordered the same day; and, in full confutation of all the injurious surmises that they did not so much as intend to save their country, prosecuted with so much zeal and alacrity, that it received the governor's assent the next day but one following.

Thus the two branches of the legislature were at last united in the great duty of making all contribute to the defence and preservation of all.

But though the storm was for the present over, some marks of recent turbulence still remained. The governor, though frequently called upon, could not be brought to pass the bill for regulating the Indian trade; the house, therefore, thought proper to press him with such a message, as should, by explaining the nature of the bill, not only indicate the nature of the abuses it was calculated to correct, but also oblige him, if possible, to account for his delay; and the message agreed upon was as follows, viz.

"*May it please the Governor,*

"As the bill for regulating the Indian trade, by employing sober and discreet persons to reside among those nations that remain friends to this province, for the purpose of furnishing them with the necessary goods in exchange for their peltry, at easy and reasonable rates, on account of the public, and thereby securing them to our interest, seems to us a bill of great importance at this juncture, we are very desirous of bringing it to a conclusion as soon as possible; and therefore once more earnestly request the governor would be pleased to let us know his sentiments upon it, and communicate the amendments he is pleased to say he thinks needful, that we may consider them. The bill has already lain before him above two weeks; and we fear, if something of the kind is not immediately gone into, we shall lose our few remaining Indians on the Susquehanna; for as none of our traders now go among them, and they dare not come down to our settlements to buy what they want, for fear of being mistaken for enemies, there seems to be the greatest danger of their being necessarily driven into the arms of the French, to be provided with the means of subsistence."

To which the governor was pleased to return the following evasive answer:

"*Gentlemen,*

"Since your bill for regulating the Indian trade has been before me, my time has been so much taken up with the variety of business that the circumstances of this province made necessary to be despatched without delay, that I have not been able to give it the consideration a bill of that nature requires, nor to examine the laws of the neighbouring provinces upon that subject. But as the Indian trade is now at a stand, I cannot conceive that it will be at all dangerous to the public to defer the completing of this act till the next sitting; especially as it will be necessary to call in and confine our friendly Indians to certain limits, to prevent their being mistaken for, and killed as enemies, where they must be subsisted. This will hinder them from hunting, so that they will have no skins no trade with."

And now, after having so often treated the assembly as a body fitter to be prescribed to, than consulted with, he took it into his head to apply to them for advice; on what account it is reasonable his own message should explain.

"*Gentlemen,*

"General Shirley, pursuant to his majesty's orders for that purpose, has requested me to meet him at New York, in a congress he has there appointed, as you will observe by the extract of a letter from him upon that subject, which the secretary will lay before you. At that meeting, business of the greatest consequence to his majesty's service and the safety of these colonies will be considered and concluded, and the success of the next year's operations may in a great measure depend on the timely resolutions of that council.

"I have lately received such intelligence as to the state of Indian affairs, as will make it necessary for the colonies to join in some general treaty with those people, as well to the southward as the northward, which can no way so well be resolved on as at the congress now already met.

"And on the other hand, the late incursions of the enemy, and the necessity there is of putting this province into a posture of defence, as well as carrying into execution the several matters now in agitation, call for my presence, and the authority of the government. Under these difficulties, I find myself at a loss which service to prefer, and desire you will give me your sentiments on this momentous and pressing occasion."

Now this congress was in fact, to be a council of war; and the instructions the general had received, according to his own account, was to summon such of the governors on the continent, as far westward as Virginia, as could, to attend it.

Governor Morris, therefore, would have been under no great difficulty on this head, if the circumstances of his province had been really such as he had been always fond of setting them forth.

But his purpose was to go; and he wanted the countenance of the assembly to concur with his inclinations, that he might not be charged with inconsistency, either by stimulating them with false alarms, or deserting them in real dangers.

The assembly, however, chose to leave the difficulty upon himself, as he alone was acquainted with the necessity of his attending the said congress; but then they left him at no loss concerning their opinion; for they admitted the present circumstances did call strongly for his presence at home, and for the whole authority of government; and they also offered to be at the expense of sending commissioners to New York, to supply his place, either in concluding on the matters proposed by the crown, or concerting measures for a general treaty with the Indians. "For, said they, as this province always has been, so we still are ready to join with the neighbouring colonies in any treaty with the Indians, that may conduce to the general advantage of the British interest, as well as, at our own charge, to make such as tend particularly to our own peace and security."

A noble declaration! what is alone sufficient to silence all the invectives which have been so liberally bestowed on this province!

and what, in modern proprietary documents and the speeches and messages of deputy-governors, it would be very hard to match.

Of the stress in this message, however, laid on the present state of Indian affairs, the house took the advantage to recollect what had passed between them and the governor in relation to the Shawanese complaint; and with an equal regard to truth and candour, took occasion in a message to the governor, to express themselves upon it as follows, viz.

"*May it please the Governor*,

"We have considered the report of the committee of the governor's council, to which he is pleased to refer us for an answer to our inquiry, relating to a claim of the Shawanese Indians, on the lands near Conedoguinet.—We are far from desiring to justify those Indians in their late outrages and murders, committed against the people of this province, in violation of the most solemn treaties. We believe that great care has generally been taken to do the Indians justice by the proprietaries in the purchases made of them, and in all our other public transactions with them; and as they have not the same ideas of legal property in lands that we have, and sometimes think they have right, when in law they have none, but yet are cheaply satisfied for their supposed as well as real rights, we think our proprietaries have done wisely, not only to purchase their lands, but to 'purchase them more than once,' as the governor says they have done, rather than have any difference with them on that head, or give any handle to the enemies of the province to exasperate those people against us. It appears indeed, from the report, that they could have but a slender foundation for a claim of satisfaction for those lands; we are, however, convinced, by original minutes taken by one of the commissioners at the treaty of Carlisle, now lying before us, that the Shawanese chiefs mentioned that claim of theirs to the lands in question at that time, and were promised that the matter should be laid before the proprietaries. It was after the public general business of the treaty was over, and was not inserted in the printed account of the treaty, perhaps because it was thought to relate more particularly to the proprietary than to the province; and one of the commissioners being himself concerned in the proprietaries' affairs, there was reason to believe he would take care to get it settled; and doubtless he would have done so, had he not, as appears by the report, entirely forgot the whole transaction. We are sorry it was not done, though probably the instigations, present situation, and power of the French, might have been sufficient nevertheless to have engaged those Indians in the war against us."

They also took into consideration the governor's answers to their several messages in relation to their bill for regulating the Indian trade; and resolved thereon, "That it was their opinion, the governor had evaded giving any answer, or offering amendments to it, that it might be transcribed and sent over to the proprietaries for their opinion or assent; that the said bill was of great importance in the present critical situation of affairs; that the delay or refusal of entering into the consideration thereof at that time, might be attended with very ill consequences; and that those consequences would not lie at their door."

And having before resolved to adjourn till the first of March ensuing, they moreover took upon them to provide for the subsistence of certain friendly Indians, settled near their frontiers, in the mean while.

Nor was this all: for the incidents of the session having shown, that it was high time for the assembly to assert their own authority, as far forth at least, as the factions and intrigues of the province at that time subsisting would permit, they called for the report of their committee appointed to sit on the several irregular and improper applications which had been made to them during the session; and having duly considered it, ordered it to be entered on the minutes of the house.

Every body knows, that the reports of committees can consist of opinions only; and these gentlemen give it as theirs, "that though it was the undoubted right of the freemen of the province, not only to petition, but even to advise their representatives on suitable occasions, yet all applications whatever to the house, ought to be respectful, decent, pertinent, and founded in truth."

"That the petition of Moore and his thirty-five followers, concerning unnecessary disputes with the governor, when no disputes had been begun; and insinuating, that the house had neglected the security of the province from conscientious scruples, was founded on mistakes and misapprehensions of facts and circumstances." [They might have said much more if they had thought proper.]

"That the petition intitled, an address of certain people called quakers in behalf of themselves and others, (signed by Anthony Morris and twenty-two others) so far as it engaged for any more than themselves, and insinuated they would be under a necessity of suffering rather than paying for other than peaceable measures, had notwithstanding the decency of its language, assumed a greater right than they were invested with; and, forasmuch as the said petitioners had not duly considered former precedents, especially the grant of two thousand pounds to the crown in the year 1711, was an unadvised and indiscreet application to the house at that time."

That the representation from the mayor of Philadelphia, and one hundred and thirty-three others, said to be of the principal inha-

bitants, but in reality a great part of them not freeholders, many of them strangers and obscure persons, and some of them under age, as it charged the house with not having a proper concern for the lives of the inhabitants, and dictated, in a haughty peremptory manner, to the representative body of the whole people, what laws to make, and threatened to force a compliance, &c. if its commands were not obeyed, was a paper extremely presuming, indecent, insolent, and improper; and that the said mayor, by becoming a promoter and ringleader of such an insult on that part of the government, and by his authority, arts, and influence, drawing in so many indiscreet or unwary persons to be partakers with him therein, had exceedingly misbehaved himself, and failed greatly in the duty of his station." Expressions equally applicable to the governor himself as chief magistrate, if the mayor in all this, only acted as a tool of his.

And upon the whole, "that the said paper ought to be rejected."

Thus ended this memorable session, on the 3d of December; and that day two months, instead of that day three months, which was the time prefixed by their own adjournment, the governor, having, in that interval, left his province, in order to attend the military congress at New York, notwithstanding the preventives thrown as above by the assembly in his way, thought fit to convene them again; and by the medium of a written message in the usual form, told them, "that he had called them together, to consider of the plan of operations concerted in the late council of war held at that place for the security of his majesty's dominions on the continent; that he had directed the said plan to be laid before them, under a recommendation of secresy, that no part of it might be suffered to transpire; that the many encroachments of the French, &c. sufficiently showed what they had farther to expect, if they did not by an united, vigorous, and steady exertion of their strength, dislodge and confine them within their own just bounds; that he was persuaded this would be found the best way of providing for their own security; and that therefore, he must recommend it to them to grant him such supplies as might enable him to furnish what was expected from that province towards the general service; that they must be sensible their success would very much depend on their being early in motion; and that he made no doubt, they would use the greatest diligence and despatch in whatever measures their zeal for the public cause might induce them to take upon the present occasion; that every thing possible had been done for the security of the province; that a chain of forts and block-houses, extending from the river Delaware along the Kittatinny hills [where he had formerly said the 1500 French and Indians had taken post in their way to Philadelphia] to the Maryland-line, was then almost complete; that they were placed at the most important passes, at convenient distances, and were all garrisoned with detachments in the pay of the province, and he believed, in case the officers and men posted in them did their duty, they would prove a sufficient protection against such parties as had hitherto appeared on their borders; that he had directed the minutes of the several conferences held with the Indians, and other papers relating to Indian affairs (by which it appeared that the bulk of the Indians living on the Susquehanna, were not only in the French interest, but deaf to all the instances of the Six Nations thereon) to be laid before them; that the heads of those nations had been convened by the timely care of general Shirley, and were then met in council to treat on those and other matters; that he was informed, they were so much displeased with the conduct of the Delawares and Shawanese, that they seemed inclinable to take up the hatchet against them; and that he hoped the warmth with which general Shirley had recommended this matter to them, would induce them to act vigorously on this occasion."

Connexion is not to be expected in this gentleman's proceedings; his congress we have already seen converted into a council of war; instead of a general treaty with the Indians, he brings back a plan of military operations; and while the levies were actually making of the sixty thousand pounds, just given, for the defence of the province, he calls upon them for a supply, towards an offensive war.

By the plan settled among the governors at their late council, which is now in print, the colonies were to raise ten thousand two hundred and fifty men, to be employed in two bodies against the French settlements on the lake Ontario, and Crown-point; and of these, fifteen hundred were to be supplied by Pennsylvania.

The governor, however, did not think it expedient to push this demand in the cavalier manner he had hitherto practised; probably convinced that it was what the province neither would or could comply with; and that consequently he should only draw down so much the more odium on himself.

Besides, the assembly was scarce met, before a circumstance occurred, which, though of an almost private nature, served to evince the truth of what has been just insinuated.

The several recruiting parties distributed through the province by the order of general Shirley, had renewed the old practice of enlisting purchased servants; the persons thus deprived of their property brought their complaints before the assembly; the assembly not only received the petitioners favourably, but also espoused their cause in the strongest terms to the governor; and as their addres

on this occasion, contains such a state both of the province and its conduct, as will serve to make the reader equally acquainted with both, the most material paragraphs are here adjoined.

"We presume that no one colony on the continent has afforded more free recruits to the king's forces than Pennsylvania; men have been raised here in great numbers for Shirley's and Pepperell's regiments, for Halket's and Dunbar's, for the New York and Carolina independent companies, for Nova Scotia, and even for the West India islands. By this, and the necessity we are under of keeping up a large body of men to defend our own extensive frontiers, we are drained of our hired labourers; and as this province has but few slaves, we are now obliged to depend principally upon our servants to assist us in tilling our lands. If these are taken from us, we are at a loss to conceive how the provisions that may be expected out of this province another year, for the support of the king's armies, are to be raised.

"We conceive that this province could not possibly have furnished the great numbers of men and quantity of provisions it has done for the king's service, had it not been for our constant practice of importing and purchasing servants to assist us in our labour. Many of these, when they become free, settle among us, raise families, add to the number of our people, and cultivate more land; and many others who do not so settle, are ready and fit to take arms when the crown calls for soldiers. But if the possession of a bought servant, after purchase made, is thus rendered precarious, and he may at any time be taken away from his master at the pleasure of a recruiting officer, perhaps when most wanted, in the midst of harvest or of seed time, or in any other hurry of business, when another cannot be provided to supply his place, the purchase, and of course the importation of servants will be discouraged, and the people driven to the necessity of providing themselves with negro slaves, as the property in them and their service seems at present more secure. Thus the growth of the country by increase of white inhabitants will be prevented, the province weakened rather than strengthened (as every slave may be reckoned a domestic enemy) one great and constant source of recruits be in a great measure cut off, and Pennsylvania soon be unable to afford more men for the king's service, than the slave colonies now do."

They also accompanied their address with an extract of a letter from general Shirley to colonel Dunbar, in which he declares himself convinced, that the enlisting of apprentices and indented servants would greatly disserve his majesty's interest, as well as be in most cases grievous to the subject, and in the strongest manner recommends it to him to avoid doing it.

Even the governor himself in his answer acknowledged the fact; admitted it to be a great hardship, and an unequal burden upon the inhabitants of the province; but, instead of issuing his proclamation, strictly charging and commanding all officers civil and military to be aiding and assisting to the inhabitants, in securing or recovering their servants, when any attempt should be made to force them away, as required by the assembly; told them the courts were open, and that the injured might there sue out his remedy by due course of law.

He also signified, that general Shirley had now altered his opinion, and issued orders different from those he had before given to colonel Dunbar. And in effect, a letter from the said general, in answer to one of the governor's, was soon after communicated to the assembly, in which he pleads the necessities of the service for a continuance of the practice; and in justification of it, cites the authority of his own government, "where it was common, he said, to impress both indented servants and others for garrisoning the frontier towns, where they often remained several years."

And his thus renouncing his former conviction, is so much the more remarkable, because the province had recently made his troops a voluntary present of warm waistcoats, stockings, and mittens; and in his letter of acknowledgment (dated but five days before that to the governor) to the assembly, addressed to one of the members, he expresses himself as follows:

"I am now, sir, to acquaint you, that I have ordered a distribution of clothing, and to desire the favour of you to make my acknowledgments to the assembly for this second instance of their public spirit and zeal for his majesty's service, and the general good of these colonies, given by them in the expedition against Crown-point.

"I cannot but hope that so laudable an example will inspire the other colonies with the like spirit, so necessary at this critical conjuncture for putting a stop to the invasions and devastations of the French and their Indians within our borders, and placing the British northern colonies in a state of security against the attempts which, from the armament sent the last year from France, and their known designs, we have the utmost reason to expect they will push this year; and that it will continue to animate the government of Pennsylvania in the common cause, as it hath hitherto done, so highly to their advantage.

"Be pleased likewise, to assure them, sir, that I shall not be wanting in making a just representation to his majesty of these marks of their zeal for the service of their king and

country, and doing every thing in my power for the service of the province."

It is indeed remarkable of Pennsylvania, that though represented and treated by its enemies, as if it was the barren fig-tree, applications were continually made to it on all sides, as if it was capable of furnishing all demands, and incapable of refusing any.

His majesty having graciously ordered a considerable present to be sent to New York for the Six Nations; and sir Charles Hardy, governor of that province, being soon to hold a meeting with them, in order to the distribution, Pennsylvania was called upon to follow the example of New York in making some addition to it: and governor Morris was prevailed upon by governor Hardy to make the demand accordingly.

Nor was the assembly averse to it: the province had agents at that very time with sir William Johnson, to sound the disposition of those nations towards them, and as sir Charles Hardy's meeting was not to take place till towards the end of March, and the governor's message was dated February 16, they apprehended that no inconveniences could ensue from their not giving a determinate answer till the return of those agents, which was very soon expected.

And in the mean time, as the governor could not mention Indian affairs to them, without putting them in mind of the bill, which had been so long in his hands for regulating the Indian trade, they again called upon him to take it into consideration.

They had now sat a full month; and had received a message from him, recommending a stop to be put to the exportation of provisions, from some ill-grounded apprehensions of a scarcity, which they had under consideration; they were also deeply engaged in a bill for the better regulation of their forces, and they had sent up another for continuing the excise, when the governor was pleased to return both that and the Indian trade bill, with several proposed amendments, and a notice, "That his majesty's service requiring his presence at Newcastle, he intended to set out for that place on the morrow, or next day after."

To redeem time, therefore, the said amendments were immediately discussed, and upon the question rejected; of which they apprized him in the following brief and sensible manner:

"*May it please the Governor*,

"The excise bill now offered the governor for his assent, being free of all objections as to royal instructions, or act of parliament, and the same that has heretofore repeatedly received the royal assent; and no reason appearing to the house why the change should be made that is proposed by the governor's amendment, they therefore unanimously adhere to the bill, and desire that it may receive his assent as it now stands.

"The bill for regulating the Indian trade, being an imitation of the law for the same purpose, found so beneficial by long practice and experience in the province of the Massachusetts, the house do also adhere to that bill as it stands; and request the governor would be pleased to reconsider his amendments."

Of this the governor took no notice, but proceeded to Newcastle, as he had before intimated he would; and as the assembly having at last conquered the difficulties raised among themselves, and passed their bill for regulating the officers and soldiers in the service and pay of the province, adjourned to the 5th of April then next ensuing.

As this adjournment was so very short, the members were permitted to have the full benefit of it; but when they met again new troubles arose; not to say were prepared for them.

Sir William Johnson's treaty with the Six Nations was laid before them; and they found the governor strongly determined to involve the province in an Indian war with the Delawares and Shawanese; which a very considerable part of the province, from principles of prudence, as well as scruples of conscience, most earnestly desired to avoid.

The affair was soon taken into consideration; and the house appeared to be far from unanimous upon it: some from the papers laid before them, finding reason to believe, that an accommodation might still be effected, were for addressing the governor to suspend his purpose for some time longer; and others had influence enough to postpone the debate, and thereby prevent their coming to any conclusion upon the question at all.

The issues of war and peace, they might probably argue, were solely in the executive; and consequently the executive was alone to be answerable for the uses made of them.

But whatever their arguments were, whatever effect they had within doors, the same difference of opinion still remained without. On one hand, some of the people called quakers, residing in the city of Philadelphia, on behalf of themselves and many others, presented petitions both to the governor and the house, full of exhortations to pursue pacific measures with these savages, and to preserve the province, if possible, from the calamities of an Indian war; and, on the other, the governor informed the house, that a number of people from the back counties had resolved on a meeting, in order to proceed in a body to make some demands of the legislature then sitting; and, after having made a merit of his information, added, "that, by the advice of the council, he should give immediate orders to the provincial and other magistrates, to use

their utmost endeavours to prevent the mischiefs which might attend so extraordinary a procedure."

The house, however, preserved their equanimity on this occasion; surprise they did express, that, having in all respects demonstrated so much care and concern for the security of the province, any of the people should meditate mischief against them; but, instead of discovering any fear, they announced the laws of the province against rioters, and accompanied their thanks to the governor for his intelligence, with a request, that he would lay before them what informations he had received concerning their views or designs, or wherein they had apprehended themselves to be either neglected or aggrieved: which request he never thought fit to comply with.

It may indeed be collected, that these insurgents were as strenuous for war as the quietists were for peace; and that the governor took advantage of this very incident to declare war against the Delawares and Shawanese, and offer rewards for taking prisoners and scalps, which he did immediately thereon. He also gave notice, in form, of the same to the assembly, urging the many and great cruelties on his majesty's subjects within the province, as the cause; and concluded his message in the following terms:

"But as great part of the sixty thousand pounds is already expended, and what remains will very soon be consumed in maintaining the troops posted on the frontiers, and other necessary services, I recommend it to you, gentlemen, to grant such further supplies, as may be necessary to carry on the war with vigour, upon the success of which the future peace and safety of the inhabitants of this province will very much depend."

The same day he also informed them, "that the Indians which had so long subsisted on the bounty of the province (instead of taking part in this new war) were on the point of removing with their families (he was fearful, on some discontent, though he knew of no reason,) into the country of the Six Nations; and had demanded of him the necessary conveyance and passports." And he added, "that if they could not be prevailed on to act with the English, which he had directed the interpreter to endeavour, it would be necessary to reward the two partizans amongst them (Scarroyady and Montour) to their satisfaction for their trouble and service, to send the others away well satisfied, and to give those that should continue good encouragement."

The house, in answer, signified in substance, "that their late supply of sixty thousand pounds had fully enabled the governor, and the commissioners who were joined with him for the disposition of it, to do all that was desired, or necessary to be done; that if great part of that supply, so lately granted, was already expended, and the rest would soon be so, they knew of no remedy; but that as the assessment for sinking the bills of credit issued in pursuance of the said act had not as yet been laid or levied, as a great part of the money was still in hand, and as they were soon to meet again upon the adjournment, then so necessary to their private affairs, having waited long for the governor's answer to their bills, they could not think it would be of use at that time to lay an additional load of taxes on the inhabitants; they concluded with an earnest recommendation of the bill for regulating the Indian trade, as a bill of great importance for conciliating the minds of the Indians yet unfixed in their resolutions, and confirming those already in alliance with them, by supplying them with such goods and other things they might have occasion for, on the easiest terms, at the charge and under the inspection of the government." And, in a separate message, sent at the same time, they farther gave him to understand, "that, having seriously deliberated on his message for putting a stop to the exportation of provisions, ever since they had received it, and made a full inquiry into the circumstances of the country, they had reason to hope that, under the common course of God's good providence, no considerable danger or inconvenience could arise from continuing to leave their ports still open till their next meeting; as also, that they proposed to adjourn till the 24th of the month next ensuing."

The return to this was, that the governor "had no objection to the proposed time of adjournment; that he thought, with the house, there was no immediate necessity for laying an embargo on provisions; that he should lay before the commissioners the affair of the Indians now in town, and endeavour to send them away well satisfied; that he expected the house would have made some preparations for executing the plan of operations for the ensuing campaign, but as they had not, it must lie upon them; that as to the Indian trade and excise bills, he should consider them against the next meeting; and lastly, that he thought it proper to mention to the house by their messengers, that although he had had more burdens laid upon him than any of his predecessors in the same time, yet he had received less from the house than any of them."

Lastly, the house taking into consideration what the governor had said relating to their not having made preparations for executing the plan of operations for the ensuing campaign, resolved, in these words, "that as this province has received no assistance from our mother country, and as we have already expended large sums of money for the raising and supporting a considerable body of men for the defence of our extensive frontiers, against

the continued depredations and encroachments of a savage and merciless enemy, besides what has been expended in maintaining the friendly Indians, French neutrals, and in other purposes for the king's service, which expenses are likely to be continued for some time; the house are of opinion, that the present circumstances of the province will not now admit of their going into any preparations for executing the aforesaid plan of operations; and that it would be not only impracticable, but very imprudent, at a time the country is so greatly distressed by the unjustifiable taking of indented servants, and so many of our freemen are enlisted and gone away, to send so great a proportion of men as is demanded of us, to so great a distance, and thereby deprive ourselves of their assistance, which we have too much reason to think we shall soon have occasion for."

These were the transactions of April 16th; and, as the reader will observe no notice was taken of the governor's remonstrance concerning himself, he will from thence, perhaps, be led to account for his reconvening them so soon afterwards as the 10th of May; he being then absent at a place called Harris's ferry, and having nothing more pressing to lay before them, than what is contained in the following abstract of his message to them upon that occasion; to wit:

"That the people of the frontier counties westward having lost great numbers of their fighting men, and the remainder being either driven from their habitations, or worn out with fatigue, there was the greatest reason to apprehend, the next attack would produce the entire evacuation of the two next counties, York and Cumberland; that the consideration of this deplorable and dangerous situation of those counties, which the most considerable of their inhabitants had, in the most affecting manner, laid before him, had induced him to call them together; that the best and speediest means might be taken to prevent, if possible, farther desolation; that the law for establishing a voluntary militia had contributed very little, if any thing, to the defence of the frontier; that he had observed it was defective when he passed it, and that it required so much time to carry it into execution, that nothing good was to be expected from it; that, though many companies had been formed under it, yet, for want of sufficient power lodged in him to order them to the frontiers, they were, as to that most material service, entirely useless; that he must therefore recommend it to them to form such a militia as might be just, equal, and carried into immediate execution, so as that he might be able to draw the strength of the province to such parts as stood most in need of it; and the whole burden of defending the province might not fall too heavily on the few inhabitants whose circumstances obliged them to remain in the back counties; that, as by the latest accounts from Europe, a considerable armament from France was to be expected in America, now to become the seat of war, and as the enemy would in such case depend upon being supplied with provisions from the king's colonies, by the intervention of the Dutch, he conceived a general embargo would be necessary; and that it should be rendered effectual, by some such special law as should be thought necessary by himself and the governors of the neighbouring provinces, which he recommended to them to prepare; and that the affairs of the province, and, in particular, the building a fort at a place called Shamokin, which was of so great importance to the province, requiring his personal care and attendance, it gave him concern that he could not be then at Philadelphia; but that they might be assured he would give all the despatch imaginable to any bills they might propose, which the secretary was to send to him from time to time by express."

To give the more weight to the militia clause, a petition was presented to the house from the officers of the association companies in the city of Philadelphia, complaining of the insufficiency of the present law, and praying that a new one might be framed, in which the defects of the former should be remedied.

The assembly gave the petition a civil but cool reception; and, in their reply to the governor's message, furnished the public with a brief of their sentiments and proceedings on the present occasion; to wit:

"That being met in pursuance of the governor's call, they were concerned for his absence; as the public business could not be transacted as it ought, where the several parties were so far asunder; that as by the joint care of himself and the commissioners, for disposing of the sixty thousand pounds, the frontier was now in a better state of defence than that of any other colony on the continent; the forts being numerous, all strongly garrisoned, and both officers and soldiers now reduced to due obedience and discipline, by means of the act of parliament, which, at their last sitting, they had extended to that province, they could not but hope, that the distressed inhabitants of the two counties mentioned, might, by the blessing of God, become more secure in their settlements, and consequently, more easy in their minds; and that more especially as they understood, there were in the interior counties many formed companies as yet unemployed, who were ready to enter into the service, and march to the frontier, whenever the governor should think fit to call them; and a considerable sum was still in the hands of the commissioners, wherewith the expense might be defrayed; that, as they conceived, the marching the militia to

the frontier on every alarm, would be less effectual for its defence, and much more expensive and burdensome to the people, than their proportion of a tax for the maintenance of standing guards; that, indeed, they had little experience of a militia in this province, consequently, in framing so new a thing as a law to regulate it, their first essay might have its defects; that, however, as the governor did not point them out, when he passed the act, and they had not since occurred to them, all they could then say was, that when he should think fit to send down any supplementary amendments, they would take them into their serious consideration; which he, the governor, might possibly be ready to do by the time to which they stood adjourned, then not far distant; that they had therewith sent him a bill for prohibiting the exportation of provisions or warlike stores from this province, which they hoped would meet with his concurrence, being in conformity with the law lately passed at New York; but that as all restrictions made by them would be ineffectual, unless the lower counties (the territory as formerly called) were in like manner restrained; they had referred the continuance of their law, to such future act as the governor and assembly of those counties should pass for that purpose; that they apprehended a strict compliance with that law would be of great service to the British interest, and therefore earnestly recommended it to the governor, that when passed it might be carried effectually into execution. And, lastly, that as the season required the present attendance of many of the members at their plantations, they proposed to re-adjourn themselves to the same time as before; when they hoped the governor would find himself enough at leisure to meet them at Philadelphia."

Thus ended this session of four days; the prohibitory law was passed by the governor at Harris's ferry; and when they met again, they received from the secretary two other messages from the same place; one designed for their farther amusement at their last sitting; but which arrived half an hour too late; and the other for the present.

According to the former, "the governor had received letters from the governors Dinwiddie and Sharpe, giving an account of the miserable condition of their frontier; and the danger they were in from the enemy, who had penetrated as far as Winchester in Virginia; he had, thereupon, redoubled his diligence for the better securing the most exposed part of their own; but he was still fearful, that, for want of a sufficient force to take the field, the garrisons on that side would not be able to keep off the numbers of the enemy, which there was the greatest reason to expect would soon appear in those parts; so that no time was to be lost in preparing, in some more effectual manner, for their defence."

According to the latter, "all the despatch he had been able to make in his works had not brought them to such a forwardness as would permit him, without prejudice to that important part of the public service, to be in town at their meeting; he had, however, the satisfaction to tell them, that he had made a lodgment in a very secure place upon the river, beyond the Kittatiny hills (the place from whence, it must be recollected, he fired his first beacon to alarm, or rather distract, the province); the secretary would lay before them a letter from governor Sharpe, with the extracts of an act of his government for granting forty thousand pounds for his majesty's service; only twenty-five thousand pounds of it was conditional [so that conditional acts were regular in Maryland though not in Pennsylvania] that Pennsylvania and Virginia contributed their reasonable quotas towards the expedition it was granted for; they must be sensible there would be no peace or safety for them [his old argument] unless these western colonies united their strength in making a well-concerted push to dislodge the French from their encroachments; and that no time was so favourable as when his majesty's forces and those of the eastern colonies were employed against them to the northward; it was therefore to be taken into immediate consideration, and he was to be enabled to give governor Sharpe the expected assurances, that Pennsylvania would, for its own sake, contribute accordingly."

A complaint from commodore Spry, that he was in great want of seamen for his majesty's ships under his command, and that he expected a supply from those colonies, brought up the rear; with a requisition "that he might be enabled by bounty or otherwise to raise and send him as many as the province could spare, which would be a very seasonable and acceptable service."

In conformity to so pressing and plausible a message, a money-bill was immediately ordered, and some progress was made therein. But advice having been received from sir Charles Hardy and sir William Johnson, that the Delawares and Shawanese had promised to cease from hostilities, and were disposed to renew and strengthen their alliance and friendship, and the governor (Morris) having caused a suspension of arms to be proclaimed thereon, they contented themselves with assuring him, "that he should not fail of the necessary support in the prosecution of such measures as might tend to bring this good disposition of the said Indian tribes to a happy issue; and with recommending it to the commissioners of the sixty thousand pounds act, to concur with the governor in furnishing

such supplies of money as might be necessary thereto." They also again put the governor in mind of the Indian trade bill, so often recommended to him before; urging, "that it might be of great service at that juncture, by bringing such of our Indians as had never been joined with, and desired to be distinguished from, those who had committed the outrages on the back settlements, under the immediate inspection and care of the government, by supplying their necessities on the easiest terms, securing their affections, and inducing others to come in for the same beneficial considerations."

A promise to reconsider it, this drew from him; but, as if he had resolved to set his own price on such a service to the province, he put them in mind, by a message the same hour, "That, though the trouble and expense of administration had been considerably greater than in any former time, no sums had been granted for his support since their first session; and he therefore desired, they would take this matter into consideration, and make such provision as was agreeable to justice and the practice of former assemblies."

What the governor's case was with respect to revenue, and what the merits of his service, may be collected from the sheets already before us; so that it will be enough in this place to say, that the assembly could turn a deaf ear as well as he; and, that he, having given them to understand in his message concerning sir Charles Hardy's intelligence, and the suspension of arms, that he had called the assembly of the lower counties to meet him on the 4th of June, in order to render the late embargo permanent and effectual, by prevailing with them to pass a law to the same effect, and that he imagined his absence for three or four days would be no interruption to their proceedings, they adjourned themselves to the 28th.

Before they separated, however, which deserves notice, six members requested leave to resign their seats for certain reasons by them specified in a paper presented to the house at the same time; and it was, after consideration, resolved thereon, that, in case they continued in the same mind after the adjournment, and delivered the said paper into the hands of the speaker [in proof thereof] their seats should be deemed vacated accordingly. They did continue in the same mind, and delivered the following paper as proof thereof:

"*May it please the Speaker and the House,*

"A few days since we communicated to the house our inclinations to resign our seats; in which the house appeared disposed to favour us.

"This repetition of our continuing in those intentions, does not proceed from any design of involving the house in unnecessary trouble; but as many of our constituents seem of opinion, that the present situation of public affairs calls upon us for services in a military way, which, from a conviction of judgment, after mature deliberation, we cannot comply with; we conclude it most conducive to the peace of our own minds, and the reputation of our religious profession, to persist in our resolutions of resigning our seats, which we accordingly now do; and request these our reasons may be entered on the minutes of the house."

The speaker hereupon sent an order to the secretary, being the proper officer, to issue writs for so many re-elections, who thought fit to refuse obedience, the governor being of opinion, that though there was an express provision by law for filling a vacancy occasioned by wilful absence, there was none for a vacancy occasioned by resignation. Upon which the speaker, by the advice of such members as were then in town, issued his own writs, founded on the same law, from whence the governor derived his objection. These writs the sheriffs obeyed, what instances soever they might have been importuned with to the contrary; the freeholders exercised their rights of electing in pursuance of them; the returns were made in the usual form; and the house resolved *nem. con.* that the members so returned had been duly elected.

Thus the breach was closed as soon as it was opened; and whatever view the governor had to serve by his opposition, he neither did himself or views any service by it.

His message, introductory to the business of the session, contained a notification of the king's having appointed the earl of Loudon commander-in-chief of all his forces in America, with two regiments of foot, a train of artillery, stores, &c. and commanded him, the governor, to give his lordship and the troops all the assistance in his power: particularly to recommend it to them, to appropriate such part of the funds already raised, or to be raised, for the public service, so as to be issued as his lordship should direct. As also of another circumstance altogether new in the British constitution; namely, his majesty being enabled by act of parliament to appoint a number of German, Swiss, and Dutch Protestants to be officers of a regiment to be raised and called the Royal* American Regiment; as also of another particular recommendation which he was enjoined to make to them, that the masters of such indented servants as

* This American regiment was to consist of four thousand men: it was to be composed of whatever protestants the colonies could furnish, and, according to the first plan, was to have been commanded by some but foreign officers; but this plan having been objected to, some abatements were admitted; namely, that the foreign officers should not exceed one half of the whole number; that room should be left for some Americans; that the commander should be always a natural-born subject, &c.

should engage in the king's service, might be indemnified out of the funds raised for the public service. And the nature of this review requires, that the sequel of this message should be given in the governor's own words, which were as follows, to wit:

"His majesty has further commanded me to recommend it to you, to pass effectual laws for prohibiting all trade and commerce with the French, and to prevent their being supplied with provisions; and as the law lately passed here for an embargo will, by the expiration of the act for that purpose passed in the lower counties, end on the seventh of July, I hope you will prepare a proper bill for continuing an embargo, so necessary for his majesty's service, and the safety of these colonies, for some time longer.

"The secretary will lay before you extracts of the secretary of state's letters to me, relating to the matters now recommended, and I hope you will without delay enter upon the consideration of them, and comply with his majesty's expectations.

"The money heretofore given for the king's use will be very soon expended, and I shall in that case be under a necessity of disbanding the troops raised for the defence of the province, and of destroying or abandoning the several forts erected upon our frontiers; I must therefore desire you will grant such further supplies as the present situation of our affairs require."

To the clause relating to the embargo, the house ordered an immediate answer to be prepared; in which, having told him what he could not but know before, "that they had already done what was now required of them, by a law still in force, and which would have so continued till August 4, the time limited by the law of New York, provided the three lower counties had also passed a law conformable thereto," they proceeded in these words;

"As provisions might be exported from this province through those counties not subject to our laws, and great quantities are raised there, we were fully apprized that any restraints we could lay upon our exportations here would by no means put a stop to the supplying the French with provisions, unless that government prohibited the exportations from thence also; we therefore limited the continuance of our act accordingly, and we must own the astonishment we were under, when we found the governor had enacted a law there invalidating the acts of the other colonies, by limiting the continuance of their act to one month only.

"As our act prohibits the exportation of provisions in conformity with the law of New York colony, with which New Jersey, we understand, has also complied, the governor cannot think it reasonable, that the colonies of New York, New Jersey, and this province, should be deprived of their laws by an act of the government of the three lower counties; therefore, as that act was passed by the governor himself, we presume, instead of applying to us upon this occasion, he will think it his duty to call the assembly of the three lower counties, to whom it belongs, to continue their law to the time limited by the other governments.

"It is well known that Maryland raises great quantities of wheat, pork, and other provisions, and yet, as we are informed, their ports have hitherto continued open to the exports of provisions from thence; the governor will therefore judge the necessity of recommending a prohibition there, without which, we apprehend, the acts of the northern and eastern colonies must prove ineffectual."

The bill of supply already before the house, was, in the next placed resumed: and to clear the way as they went, a new message was sent to the governor to know, whether he had come to any resolution on the excise and Indian trade bills? to which, in effect, he answered, that, as to the latter, he thought his amendments to it so just and reasonable, that he could not, therefore, recede from them; and as to the former, that he had added a clause by which the money to arise by it, was to be disposed of in such a manner as the governor and commander-in-chief, and in case of his death or absence, the president of the council and the assembly should direct; adding, "this manner of disposing of the public money appears to me most conducive to the general interest, and you will observe by an article in the proprietary instructions to me, which I send you herewith, that I am restrained from passing any bill of that nature without such an appropriating clause."

And this instruction was delivered in the terms following, to wit:

"You shall not give your assent to any law for prolonging the present excise, or laying any other excise, or raising any money on the inhabitants of the said province of Pennsylvania, unless there be an enacting clause, that all money arising from the said excise, or other duties, shall be disposed of only as we or either of us, exercising the office of governor, or the lieutenant-governor, or, in case of his death or absence, the president of the council, and the house of representatives, for the time being, shall direct; and not otherwise."

Thus the great proprietary secret, so long suspected, so long and so cautiously preserved, and which had operated so mischievously and dangerously, not only to the province of Pennsylvania but all the provinces adjoining, was at last acknowledged; and it thereby became undeniable, that, under such a commission, enforced by a penal bond upon the holder of it, neither the province could be protected, the king served, or the interest of the com-

munity maintained, unless the freemen parted with their birth-rights, and the special confirmations of them contained in their charter.

And it is equally to be wondered, that any two subjects in the king's dominions, should presume to exact such concessions from their fellow-subjects as his majesty himself neither has, or makes any claim to; and that any gentleman should submit to serve them on such equally tyrannical and servile terms.

The resolutions of the house hereon were worthy of the occasion, and as such are equally worthy of having a place in this work.

"Resolved, that it is the opinion of this house, that the said proprietary instruction was the principal, if not the only, obstruction to the passing of several bills offered to the governor by the last assembly for granting money for the king's use.

"That the act for laying an excise on wine, rum, brandy, and other spirits, passed in the year 1744; and the act granting five thousand pounds for the king's use, passed the 24th of June, 1746, by which the said act for laying an excise on wine, rum, brandy, and other spirits, was continued for ten years next after the first day of June, 1746, have received the royal approbation.

"That acts laying an excise on spirituous liquors have been found necessary for defraying the charges of government, and have been continued within this province for more than thirty years; and that the governor's not passing the bill presented to him for continuing the excise, upon the terms of all our former acts, repeatedly approved of by the crown, from an apprehension that he is restrained by the said proprietary instruction, is evasive and frivolous, and an infringement of our just rights; and, that, as deputy-governor of this province, he has, or ought to have, full powers to give his assent to all such bills as we have an undoubted right to offer.

"That the said instruction 'is not calculated to promote the happiness and prosperity of this province, and is inconsistent with the prerogative of the crown, and the liberties of the people;' and that all proprietary instructions, not warranted by the laws of Great Britain, are illegal and void in themselves; nevertheless, if the governor should apprehend himself bound by such proprietary instructions, they may prove ruinous to the province, and of dangerous consequence to the British interest in America.

"That the house do adhere to the bill for continuing the act for laying an excise on wine, rum, brandy, and other spirits, as it now stands, without admitting the governor's proposed amendments thereto."

It now also became apparent to the province, that even the boasted free-gift of the proprietaries of five thousand pounds, was not to be obtained but as it could be collected out of the arrears of their quit-rents; and that it being impracticable to collect such a sum fast enough to answer the public demands, the deficiency could no otherwise be made good than by act of assembly for striking the sum of four thousand pounds, remaining due on the proprietary-order, in bills of credit, to be sunk out of the growing payments as they should come in. This, in short, was the favour applied for on their behalf by their receiver-general, who declared, at the same time, that he had consulted the governor on this head, who had expressed his readiness to concur with the house in a reasonable bill for that purpose; not directly to the assembly, however, was this favour applied for; nor as a favour to the proprietaries; (that would have been beneath the proprietary dignity:) but by the interposition of the commissioners of the sixty thousand pounds act. The assembly nevertheless gave way to the expedient; the receiver-general had leave to bring in a bill for the purpose; and the same, with a different preamble, was passed and sent up to the governor. The difference is this—In the first, the reason assigned for the bill was to this effect; "whereas the proprietaries have been pleased to make a free gift of the sum of five thousand pounds towards the public charge, &c. whereof their receiver-general had as yet been able to pay but one thousand pounds; to the end, therefore, that the good intentions of the proprietaries in the said gift may be fully answered, and the public may receive the immediate benefit thereof, be it enacted, &c."—In the second, care was taken to specify, that the said sum was to be applied towards the public charge, and was given in consideration of their [the proprietaries] being exempted from the payment of their taxes towards raising the sum of sixty thousand pounds.

On the same day that the bill was thus sent up, namely, the seventh after their meeting, they also sent up a money-bill, for granting the sum of forty thousand pounds for the king's use, and for striking the said sum in bills of credit, and to provide a fund for sinking the same; and, upon the receipt of the said bill, the governor was pleased to say, "That he would give it all the despatch in his power, but that he could not say when the house might expect to know his result thereupon, as he was that day going to Newcastle, in order to meet the assembly of the three lower counties."

Notwithstanding which, the two members to whom he thus expressed himself, were no sooner withdrawn, than he sent after them another message to the house, signifying, "That by intelligence he had received from two Indians, two days before, the western Indians were forming themselves into a body in order to attack the province about the time

of harvest, &c." adding, "If upon consideration of this matter, any other measures are necessary for the public safety, you will enable me to take them."

Thus, harlequin like, he could play contrary parts in the same interlude. If a supply was not given without delay, the troops were to be disbanded, the forts destroyed, and the frontier consequently laid open; and yet, with a supply in his hand, he could deliberately go upon another service; at the same time he could also communicate intelligence of additional dangers: and yet with the same supply in his hand, he could insinuate want of ability to withstand them.

The assembly, in fact, told him in reply to this message, that in case he passed their bill, he would find himself sufficiently enabled to take every measure that might be necessary.

What is farther remarkable, a merchant of Philadelphia, who had supplied the garrisons in Newfoundland with provisions for six years, and who had now a vessel in the port freighted with the same, could not obtain a clearance; the governor and council being unanimously of opinion, that, because of the late act to prevent exportations, no such clearance could be granted. A member of the house, who, by order from the navy-contractor at Jamaica had, in like manner, freighted a ship, met with the same difficulty under the same pretence. Both made application to the house for relief: and it was not only resolved, that the said act was of the same tenor with that of New York, and never intended in any wise to restrain the exportation of provisions for his majesty's navy and garrisons, nor could, in their opinion be so understood, except by the most forced construction thereof; but also, that to prevent any ill consequences which might arise from such interpretation, a bill should be immediately prepared at the table for expressly permitting such exportations.

This bill, when finished, was sent up to the governor, who promised to give it all the despatch in his power; and was followed by another for a longer continuance of the embargo act, with a similar clause of explanation; upon the presenting of which, the governor being asked, by order of the house, whether he had come to any determination upon the former? answered, "that he had read but not considered it." And being farther pressed on the necessities of the service, according to the allegations above specified, said "that, in case the legislature of the three lower counties did not continue the embargo, the same would expire in a few days, and then there would be no necessity of the said supplementary act; and if the embargo act of the three lower counties should be continued, he would have it in his power to permit vessels laden with provisions or stores for his majesty's service to sail at any time, by the bill the house had sent him for that purpose."

Thus the two ships were to be continued in port, to wait the good pleasure of another government; and the interval was to be lost to the service, unless the owners found ways and means to accommodate matters with the governor.

The house, however, plied him with another message, and received such another illusory answer; they also again put him in mind of the forty thousand pounds supply-bill: and were told (notwithstanding his pressing message at the opening of the session) "That he had not read it through; but that he thought it stood in need of amendments." He also told the two members employed upon that occasion, "He was just then setting off for Newcastle;" and they acquainting him farther, "That, as it would be extremely inconvenient to the country-members, to continue sitting till his return, and as there was no business depending of any importance, but what lay before the governor, they had thoughts of adjourning that day (being July 5) to the second of August, by which time the harvest would be nearly over," his answer was, "That he had no objection to their adjourning over the harvest, and that he approved of the time proposed."

And the house, on the return of their messengers, having first resolved, "That any ill consequences which might attend the governor's not passing their supplementary bill (for exporting provisions for the king's service notwithstanding the embargo) would not lie at their door," did adjourn accordingly.

After all which, on that very day fortnight (July 19,) in the very midst of the harvest, did this worthy governor oblige the members by special summons to meet him; the occasion of which is thus set forth in his message to the house of that day, to wit:

"Gentlemen, at your instance I called the assembly of the lower counties, and pressed them to continue the prohibition of provisions and warlike stores to the time limited by the laws of New York and Jersey, but they chose only to continue it till the 20th instant, and from thence for so long time as the legislature of this province should pass or continue a law for the like purposes, provided the same did not exceed the 22d day of October next. I am thereby laid under the disagreeable necessity of calling you together at this busy season, in order to have the embargo continued for the same time that it is in the provinces of New York and Jersey; and as the acts of assembly passed for the prohibition of provisions and warlike stores will expire with tomorrow, I hope you will immediately enter upon this matter, and give it all the despatch the nature of the thing requires. The secre-

tary will lay before you a copy of the act of the lower counties, and you will, by proper clauses in the law you may think it necessary on this occasion to propose, leave me at liberty to send supplies to such of the king's ships and forces as may be employed in any part of America, and to put the trade of this place, while the embargo lasts, upon the same footing it is in the other bread colonies."

And the very next day the merchants, owners, and masters of vessels then lying in the port, presented a petition to the house, "setting forth the damages and losses they had sustained for want of being allowed proper clearances; as also the disadvantages, discouragements, and losses which the whole province would * specially and unavoidably be liable to, in case the embargo was to be continued for a longer time, than by the late law was provided; recommending bonds with sufficient penalties, to be discharged only by the certificates of the British consuls residing at such foreign ports as the several vessels and cargoes were entered for, and consigned to, as the only proper expedient to answer the ends proposed by such laws, without destroying their trade, on which the well being of the province depended; and requesting such relief and assistance in the premises as they, in their wisdom, should judge most expedient; as no wise doubting their ready and hearty disposition towards the general good and service of their country."

Fruitlessly dismissed, and impertinently reconvened, as the assembly had been, within so short a time, a warm expostulation was the least that could be expected upon it; and yet the warmth they showed was by no means equal to the provocation they received; but on the contrary, was at once so moderated and justified, that their worst enemies could not derive the least pretence of reproach from it.

Facts were in their favour; and a mere recapitulation of them was all that was necessary to show how unworthily they were treated; which will account for the insertion of their answer to the governor in this place at large.

"*May it please the Governor*,

"On the 4th of May, 1756, the legislature of New York passed an act to revive an act, more effectually to restrain the exportation of provisions and warlike stores, from that colony, to be in force for twenty-one days; and after that time, to such time as the legislature of New Jersey, and Pennsylvania, should pass acts for like purposes; provided those acts did not exceed three months from the passing of that act, which was from the 4th of May to the 4th of August next ensuing.

"Sir Charles Hardy having recommended to our governor, that he should lay before the assembly of this province, the necessity of enacting a law of the same tenor within this government; and the house being convinced, that such an act would be totally useless, unless the three lower counties of Newcastle, Kent, and Sussex, (not subject to our laws) were included, passed an act on the 13th of May, of the same tenor, and nearly in the same words, with the act of New York, to be in force till the 7th of June, and from thence for so long time as the legislature of the colony of New Jersey, and the counties of Newcastle, Kent, and Sussex, upon Delaware, should respectively pass laws for the like purposes; provided they exceed not the time limited by the law of New York government.

"On the 29th of May, the legislature of New Jersey passed an act, to be in force from the first day of June to the first of August, and from thence for so long time as the legislatures of the colonies of New York and Pennsylvania should respectively pass laws for the like purposes, provided they did not exceed three months from the said first day of August.

"This being the state of the laws laying an embargo on the exportation of provisions and warlike stores; first, by the colony of New York on the 4th, then by this government on the 13th, and by New Jersey the 29th of May last; it is most unkind, and give us leave to say, in our opinion, unbecoming the dignity of government, that in the governor's last message he should not take the least notice of any law being ever passed by us for laying any embargo within this port, but only mentions his having pressed the assembly of the lower counties 'to continue the prohibition of provisions and warlike stores, to the time limited by the laws of New York and Jersey,' as if no such law had ever been passed by himself within this province! what purpose such a conduct towards us is to answer, the governor best knows. But when he proceeds in his said message to propose to us 'to have the embargo continued for the same time that it is in the provinces of New York and Jersey,' we must confess we are entirely at a loss to know what the governor would mean; our present act coming precisely within the governor's recommendation; being made in compliance with the law of New York. If the lower counties have not complied with those terms, it is not to be imputed to the assembly of this province, who have fully discharged their part to make the embargo effectual.

"We entreat the governor to consider and reflect on the share he has had in the laws of the lower counties, passed by himself, which

* Boston having little of provision to export besides fish, which was excepted by their act; New York having a tolerable market, because the forces took off a great part of their product; and Virginia and Maryland having had their ports open all this time.

seem calculated to give this house unnecessary trouble to no good purpose whatever; for now when he has thought fit to call us together in the heighth of our harvests, our servants generally taken from us, and the country in want of labourers, what has the governor been pleased to propose, but to pass an act to continue the embargo 'for the same time that it is in the provinces of New York and Jersey,' which is the tenor and limitation of our present act, it being to have continued (had the lower counties passed their acts in conformity with the laws of New York, as this province and New Jersey had already done) to the 4th day of August. And as New York has not extended their act that we know of (which will probably become unnecessary on the proclamation of a war with France, now daily expected) any new act we could make would only be to continue the act of this province to the time it was to continue; which is such an absurdity as we presume on reflection the governor will not insist upon.

"But that no time might intervene whereby the French might be supplied with provisions, or warlike stores from this province, we, at our last sitting, put into the governor's hands 'a bill to continue the act for preventing the exportation of provisions, naval or warlike stores, from this province to Cape Breton, or to any other, the dominions of the French king, or places at present in possession of any of his subjects,' to prevent, as much as lay in our power, any deficiencies which might arise from the conduct of the assembly of the three lower counties, if they should think fit to invalidate the acts of the other colonies for laying a general embargo.

"At the same same time we also sent up a bill, intitled, a supplementary act to a law of this province, intitled, an act for the more effectual obstructing the exportation of provisions and warlike stores from the province of Pennsylvania; which bill, if the governor had passed it at the time it was sent to him by the house, or if he should hereafter be pleased to give his assent thereto, would prevent all doubts, and give full liberty to send supplies 'to such of the king's ships and forces as may be employed in any part of America;' and we have never endeavoured to put the trade of this place, where the interest or dignity of the crown is concerned, on any other footing than it is in the other colonies."

The two members appointed to wait upon the governor with this paper, were also charged with the bill for striking four thousand pounds in bills of credit on the proprietaries' account; and to acquaint him thereon,

That the house think it highly necessary that there should be some preamble to the said bill, otherwise those who are not particularly acquainted with our affairs, may imagine that the proprietaries have thereby given four thousand pounds over and above the five thousand pounds specified in the act for granting sixty thousand pounds to the king's use; the house therefore propose, that since the governor is averse to having it mentioned in the preamble, that the said five thousand pounds was given by the proprietaries in consideration of their being exempted from the payment of their taxes towards raising the aforesaid sum of sixty thousand pounds, although the same is expressly declared in that act, without any objection having been made thereto by the governor, at the time it was passed, they will leave out the first clause of the preamble, and instead thereof insert the following clause, viz.

"Whereas the honourable proprietaries of this province have been pleased to make a free gift of the sum of five thousand pounds, for the purposes and in the manner particularly set forth by an act of general assembly of this province, passed in the twenty-ninth year of his majesty's reign, intitled, an act for granting the sum of sixty thousand pounds to the king's use," &c.

The governor after reading the message was pleased to answer,

"That he believed the house had misunderstood his message; that he had no intentions of disobliging them, and that he was sorry to see they had taken any offence; however, as he was about leaving the government, he should not return any answer to it; and that as to the bill for striking four thousand pounds, to be replaced by the proprietaries' receiver-general, he thought the house gave a good reason why there should be some preamble to the said bill, and that he would take the one proposed into consideration."

The result of which consideration was, the sending down another preamble in lieu of the first, specifying the free gift, but dropping the consideration of exemption, without taking any notice at all of the last; which other preamble was unanimously rejected on the first reading.

That they were still willing to pass the bill with their own second preamble, they, nevertheless, informed the governor; and, in the same message, they also desired to be informed, "whether he had come to any resolution concerning the excise-bill, and the forty thousand pounds bill for the king's use?" and here the affair stuck; the governor remained mute; or at least only answered the two latter parts of the message, without taking any notice of the former. "The excise-bill, he said, he neither could or would pass;" and as to the forty thousand pounds bill, he sent it down so amended, by leaving out the clause for taxing the proprietary estate, as again rendered the session abortive; the house resolving to adhere to their bill as sent up, without admitting his said amendments.

So that after all the parade which had been

made both there and here of this prodigious gift, the province was either to receive it in so peddling a way, as rendered it in a manner useless; or else, though they took it upon their own credit, to release the donors in effect of all future claim, by consenting to drop the terms on which alone it could be consistently accepted.

What is farther remarkable, during the course of this interchange of messages, one from the governor, concerning Indian affairs, was sent to the assembly, which was altogether irreconcilable with that which he had sent them sixteen days before. It will be recollected, that on the 5th of the current month July, the western Indians, in contradiction to the advices received from sir Charles Hardy and sir William Johnson, were to fall on the province in time of harvest; and now, on the 21st, in conformity to those advices, such of the said western Indians as had attended the conferences between the Six Nations and the said sir William Johnson, had not only laid down the hatchet, but also engaged to follow the example of the said Nations, in assisting us against the French. Nor was this all: a number of the Susquehanna Indians, and Teedyuscung a king of the Delawares, had discovered so good a disposition to return to their alliance and former friendship with us, that nothing was wanting but an interview between him (the governor) and them; and a proper provision for the expenses hereof, and the fulfilling such engagements as the present exigencies might require.

Such were the tidings now imparted, with an assurance, that he should therein have a particular regard to the honour and safety of the province.

To the province nothing could be more agreeable than such tidings; nor could any service be named in which they would have laid out their money more willingly; but their public stock was exhausted; and by the several negatives put upon their bills, they were disabled from raising more; consequently were as much distressed now for the means of making friends, as before for the means of defending themselves against their enemies.

What sum would be sufficient? was the first question; the governor being consulted on that head, answered, "That he had made no calculation; but it seemed to him, that about four or five hundred pounds might serve; though the expense would be the greater, as he should be obliged to have a body of soldiers for his guard;" the commissioners of the sixty thousand pounds act were next advised with; and upon the issue of all, they made use of this incident to lay a brief state of their case before the governor in the usual way of message; in which having expressed their satisfaction in the news imparted, they proceeded as follows, viz.

"And in this critical juncture, when a happy issue of a treaty with the Indians must be so of great advantage to the proprietary interest, as we apprehend the present treaty must be, we cannot suffer ourselves to doubt their willingness to contribute towards the heavy expenses the province groans under for Indian affairs; especially considering the governor has just now refused to pass our bill for granting forty thousand pounds to the king's use, because the proprietary estate was therein taxed, in common with all the other estates in this province, for their mutual defence; and has also refused to continue our excise act, some time since expired; so that the province is greatly indebted, and our only remaining fund reduced to the lowest extremity.

"Under these circumstances, we made application to the commissioners, appointed by the act for granting sixty thousand pounds to the king's use, to know whether any money remained in their hands, which might be applied to the present emergency; but we find, that the fifty-five thousand pounds, to be sunk by the provincial tax, is expended; that near four thousand (part of the five thousand) pounds, given by the proprietaries, in consideration of their being exempted from their share of that tax, is not paid into the commissioners' hands; and if the whole sum was paid, the debts already contracted for the defence of the province, are nearly equal thereto. Nevertheless, as we apprehend the treaty proposed to be held with the Susquehanna Indians, and the Delaware king Teedyuscung, may be attended with lasting good consequences, we have resolved, that the sum of three hundred pounds, be allowed by this house for that purpose."

The members sent herewith, were also to apprize him, that if it was pleasing to him, they should adjourn to the 16th of August; and his answer was,

"That he should not engage for the proprietaries' contributing any thing towards the expenses that may attend the proposed conference; that as the house had voted three hundred pounds for that purpose, he should wait at Easton or Bethlehem till the whole was expended, then take his horse and ride away to New York to meet lord Loudon; and that as to the time of adjournment, he should not say whether he was pleased or displeased with it, but leave it entirely with the house to do as they pleased."

A compliment from general Shirley to the province on his being recalled, acknowledging the "repeated instances of their contributing towards the defence of his majesty's just rights and dominions, and to assure them of his

hearty wishes for their welfare," without one civil thing to his brother governor, though the letter is directed to him, is the only thing remarkable of the session hitherto omitted; and injuriously, wickedly, and impudently, as the province has been aspersed, no voucher of that authentic nature can, or ought to be dispensed with.

On the 16th, according to their adjournment, they met again; and the next day they were honoured with the governor's message; which told them, in the first place, what they had long told each other before, namely, "that their treasury was exhausted; that the troops wanted their pay; that a supply was necessary," &c. The taking and burning of an out-fort on the Juniata, called fort Granville, made a good terrifying ingredient in it; the rest was the stuff that he had talked over and over, till the ear was weary of hearing it; except that major Rutherford, the commanding officer in that province, of the New American regiment then raising, wanted barracks for one thousand men; and that his recruits being chiefly indentured servants, it would be necessary for the house to make provision for the payment of their masters, for the residue of the time each had to serve, in conformity to his majesty's instructions."

The next day the house sent up their reply, which was as follows:

"*May it please the Governor*,

"The house have repeatedly offered the governor bills for granting considerable sums to the king's use, to which he has refused his assent, being restrained by the proprietaries, as he says, from passing any bills in which their estate is to be taxed towards its defence. We know of no equitable way of raising such large sums as are now necessary, but by a general tax on all estates real and personal. We have voted another sum of forty thousand pounds, to be raised in that manner, and are preparing a new bill to lay before the governor for that purpose. But as we are, and must be still, of opinion, that the proprietary estates ought to be taxed in common with those of their fellow-subjects in all the rest of the king's dominions, for their common defence, we cannot omit a clause of that kind in our bill, without injustice to the king's other subjects, ourselves, our constituents, and posterity; and we believe, that an equal number of men, of any sect, nation, name, or party, among us, will never be chosen to represent the province, who would be of a different sentiment in this particular.

"In the mean time, we earnestly request the governor would use his influence with the proprietaries' receiver-general, to induce him to pay the remaining sum of near three thousand pounds, yet behind of their contribution of five thousand pounds, which by law was to have been immediately advanced, but is still withheld from the commissioners, to the injury of the poor soldiers, whose pay is in arrear for want of that money, the fifty-five thousand pounds we granted by the said bill for the king's use being expended.

"We are sensibly affected with the distressed state of our frontier inhabitants; though we apprehend they are in a much better situation than those of the neighbouring provinces, who are equally near the enemy: and we hope they may be rendered still more secure, by a vigorous exertion of the force now on foot for their protection, and the annoyance of the enemy.

"The other matters recommended to us by the governor, we will take into consideration, and hope we may be able to do therein whatever ought to be expected of us."

This was the last parley between the assembly of Pennsylvania and Mr. Morris, who makes so notable a figure on their list of governors. Captain Denny his successor was at hand; and therefore he did not think it worth his while to compose a reply, which he might reasonably suppose no body would think worth reading.

Change of Devils, according to the Scots proverb is blithsome!

> ——Welcome ever smiles,
> And farewell goes out sighing——

says Shakspeare.

The whole province seemed to feel itself relieved by the alteration of one name for another. Hope, the universal cozener, persuaded them to believe, that the good qualities of the man would qualify the governor. He was received like a deliverer. The officious proprietary mayor and corporation, more than once already mentioned, made a feast for his entertainment; and having invited the assembly to partake of it, they also were pleased to become forgetful enough to be of the party.

That the said assembly, should congratulate him on his arrival and accession (though the term is a royal one) was, perhaps, no more than a decent and respectful compliment; and that they should augurate from the excellence of his character, that his administration would be excellent, a fair and candid inference. But that they should find six hundred pounds at that time in their treasury to present him with, as an initiation-fee, may be matter of surprise to all readers of their votes alike. Tired they might be of opposition; pleased to find some pretence for relenting; but how they should find money where no money was, would be beyond conjecture. The order, therefore, on their treasurer, for that sum, could only be considered as a present mark of their good will, and an obligation on the house to provide, in some future money-bill, for the discharge of that order.

Compliments over, government began.—

And in the new governor's very first speech, the province was given to understand, "that the French encroachments on the Ohio, which his majesty in his declaration of war had assigned as the principal cause of his entering into a just and necessary war, were within the limits of it, [which the province could never yet be convinced of;] and that therefore it was particularly incumbent on them* to exert themselves in the support of such measures as had been, or should be, concerted for carrying on the same with vigor; the state of the frontiers too, the devastations, cruelties, and murders committed there, and the horror they excited in him, made as good a topic in his hands, as the back counties, and the back inhabitants had done in his predecessor's; nay, those very back inhabitants are brought forward in the next paragraph; and, what is more, left naked and defenceless to a savage and merciless enemy by an immediate disbanding of the provincial troops, which, as before, was represented as unavoidable, unless fresh supplies were quickly raised for their support."

In short, if Mr. Morris had made the speech himself, he could not have carried on the thread of government with more consistency; for, as to the douceur at parting contained in these words, "let unanimity and despatch prevail in your councils; and be assured I will deny you nothing that I can grant, consistent with my duty to his majesty, and the rights of the proprietaries," it amounted to no more than this, do as my masters the proprietaries would have you, and I will say nothing to the contrary!

It is not to be conceived, that men of such long experience in the affairs of the province (so the members of assembly were characterized by their new governor) could be one moment at a loss for the meaning of his speech, or what was to be apprehended in consequence of it.

They had voted a supply of forty thousand pounds before Mr. Morris was superseded. They did not sit, as usual, in the afternoon of the day the speech was delivered; and though in the next day's deliberation they dropt the former bill, and ordered in another with a blank for the sum, they adjourned the day following, without doing any business at all; nay, though quickened the next following with a message accompanied with an extract of a letter from lord Loudon, as also several other letters and papers (among the latter, one containing a letter from colonel Armstrong, concerning some secret which was to be kept a secret still) they demurred both that and three days more, before they came to any farther resolution; and then they agreed upon an address by way of answer to his speech, in which, after a paragraph or two of compliment, they dryly gave him to understand, 1st, "that from the very nature of their frontier which was so extended that it in a manner covered the three lower counties, Maryland, and New Jersey, and consisted of dispersed settlements, the horrors he talked of could not be prevented; 2dly, that as it was in a better state of defence than that of any of the neighbouring colonies equally near the enemy, they could not but hope the inhabitants would be equally safe; and 3dly, that as great unanimity did prevail in their councils, they should, as far as lay in their power, consistent with their just rights, enable the governor to afford the people the continuance of that protection they so much stood in need of," &c.

They also accompanied the said address with the following message; which was obviously of the nature of a postscript, calculated to contain the business purposely omitted in the letter it belonged to.

"*May it please the Governor,*

"As soon as we heard and considered the governor's speech, and before we received his message with the letter from lord Loudon, we resolved to give a sum of money for his majesty's service; demonstrating, by that readiness, that we are not insensible of our duty to the best of kings, nor of the necessity of enabling the governor at this critical conjunction to protect the people committed to his care.

"As former grants of this kind have been long delayed, or rendered ineffectual, by means of latent proprietary instructions, not communicated to us till we had spent much time in vain in forming our bills, we would now humbly request the governor to lay before us full copies of such of his instructions as relate to money-bills of any kind, with the preambles or other parts that contain the reasons of such instructions; that we may, if possible, avoid all occasions of delay in affairs so important, and that our judgments may be informed of the equity or necessity of rules to which a conformity is required.

"From the governor's candour, and sincere desire to facilitate and expedite, by every means in his power, what is necessary to the public welfare, as well as from the reasonableness of the thing in itself, we have no doubt that he will favour us in granting this request."

The assembly was civil; the governor was artful. As he would not grant all that was

* Had the French fort really been within the bounds of the grant to the proprietor, that would not have made the support of the war more particularly incumbent on the assembly of Pennsylvania, than on any other neighbouring government, equally affected and incommoded by its situation. For the country was as yet uninhabited; the property of the soil was in the proprietors; who, if it could be recovered from the French would demand and receive exorbitant prices for it of the people. They might as justly be told, that the expense of his law suit with the proprietary of Maryland, for recovering his right to lands on that frontier, was particularly incumbent on them to defray.

asked, he resolved to be as forward as possible in performing as much as he designed. Thus, on the very day their request was made, he laid the instructions in question before them; being the eleventh, twelfth, and twenty-first articles of the proprietary instructions.

Of these, the first regards the interest money arising from the provincial bills of credit, and the money to be raised by excise; and having by advance asserted a joint intention in the said proprietaries, and the house of representatives, to have it applied for the public service, proceeds to ground upon that joint intention a title to an equal power over it; then forbids the governor to give his assent to any bill or act of assembly for emitting, re-emitting, or continuing any paper-currency, unless the whole of the interest money arising therefrom should be disposed of only to the very purposes to be specified in such act, or where that could not be conveniently done, by the joint concurrence of governor and assembly for the time being. And the same prohibition is also extended to all excise laws, except the disposition of the money to be raised by them is also appropriated in the same manner.

The second, having admitted that a reasonable and moderate quantity of paper-money tended greatly to the benefit of the province, as well as to the trade of Great Britain, and that the dangers of depreciation arose only from an over great quantity, authorizes and impowers the governor discretionally, on proper inquiry made, and proper assurance obtained of the real utility of such a measure, to make an addition to the present currency of forty thousand pounds more; provided strict regard was had to all the limitations specified in the instruction foregoing; and also, that effectual care was taken that all rents and quit-rents, due to the said proprietaries, should be always paid according to the rate of exchange at the times of payment between the cities of Philadelphia and London, by some sufficient provision in the very act itself, or some separate act, as was done in the 12th of the present king, when the farther sum of eleven thousand one hundred and ten pounds five shillings was issued.

And the third related to the proprietary estate; concerning which it asserted and maintained, 1st, that the said estate never had been taxed; 2dly, that, over and above such exemption, several acts were passed, giving to the said proprietary a support by duties and other impositions; 3dly, that, since the expiration of those laws, no aid had been given to the proprietaries as such; notwithstanding which, they had, on several occasions, shown their regard to the public service, by voluntarily and cheerfully expending several considerable sums of their own money for the advancement thereof, although no provincial tax had been laid upon the people within their time, till the last year; so that, not having any reason to suspect, the assembly would deviate so much from the ancient usage, as to pretend, by any act of theirs, to charge their estate with the burden of any taxes, they had therefore given the preceding governor no particular instructions on that head; 4thly, that the assembly, taking occasion of the troubles of America, had represented them in a very untrue light, as unwilling to assist the public by contributing to the defence of the country, though no application had been made to either of them for that purpose; 5thly, that the bill they had prepared and sent up for raising fifty thousand pounds for the king's use, by a tax of twelve cents per pound, and twenty shillings per head, was a bill of a most unjust and extraordinary nature; in as much as the estates of the proprietaries were not excepted, but, on the contrary, the assessors were to acquaint themselves with, and procure the amount of their estate in quit-rents, and in the same manner as other estates were assessed and taxed in the respective counties, by virtue of the said bill; as the said twelve cents was laid on the whole value or fee-simple of every estate, which, supposing the same computed at twenty-five years' purchase only, was a quarter part more than the whole gross rent, without allowing for any charges or repairs; as it was contrary to the royal charter, which required land-tax bills, as well as other bills, to be consonant to reason, the laws, statutes, and rights of the kingdom, &c. not repugnant to them; as so heavy a tax was not necessary to be laid for the raising such a sum, which might have been raised many other ways; as calculated for the purpose of putting it in the power of persons wholly chosen by the people to tax their estates up to their full value, and to ease other persons, by taxing them so lightly, as only to make up what might afterwards be wanting to complete the said sum; as the taxing of unimproved lands, yielding no rent or profit to the owner, was highly unreasonable, and contrary both to the practice of Great Britain, and the laws and statutes thereof; as, according to the best inquiries they could make, neither the quit-rents reserved to the crown, or the proprietaries of any other colonies, had ever been taxed towards the raising any supplies granted in those colonies; quit-rents in general being indeed so small, that little or no land-tax would be payable out of them, even in Great Britain, where land-taxes are annual; and as the grantees and owners of such farms and plantations, out of which such very small acknowledgments were reserved to them, did in case of a land-tax, pay for the value of such their said farms; 6thly, that though their deputy governor did refuse his assent to the bill, on the assembly's refusing to exempt

their estates, they were so far from desiring not to contribute to the defence and support of his majesty's rights and dominions, that immediately on the first notice sent them of Braddock's defeat, they sent over an order to their receiver-general to pay out of the arrears of their quit-rents the sum of five thousand pounds, as a free gift towards the defence of the province, desiring all disputes might cease, and that the governor and assembly would join together in measures to oppose the common enemy; 7thly, that the said sum of five thousand pounds, so by them given, was, according to their belief, twenty times more than the tax upon all their estates there, if truly and proportionably rated, according to the value of all other estates, would have amounted to, for raising a sum of fifty thousand pounds; 8thly, that another bill of the same unjust nature, for raising fifty-five thousand pounds, by a tax of six pence in the pound on the clear value of all estates (theirs excepted in consideration of the said free-gift) their then lieutenant-governor not being provided with particular instructions with respect to such bill, and because the money was then requisite for the defence of the province, gave his assent to; 9thly, that they, tendering as they ought to do, the then exigency of affairs, and the necessity of a supply, did not make any application to his majesty for his royal disallowance of the said act, as at any other time they should have done; 10thly, that the assessors appointed by the assembly in both the said bills were few in number, chosen by the people only, and not one by them; and though incapable of knowing the true value of the several estates, so to be rated and taxed, were made final and absolute judges without appeal; 11thly, that by laying so great a tax to raise so small a sum, the said assessors had it in their power to commit great irregularities, in taxing some estates to their utmost value, and easing others, which would be unequal and unjust, and was so much the more to be feared, because they, the proprietaries, had been informed, that in assessing the ordinary county levies on the like plan, many persons, instead of being rated at their full worth, had not been rated at a fiftieth part of it.

All these several articles (here stated in their full force) are introduced with a Whereas at the head of each, and all implicated in one embarrassed immeasurable period; to which is tacked the instruction itself, with the following preamble:

"And whereas the said assembly appear to us to have been inclined not only to load and burden our estates with taxes by their authority, directly contrary to former usage, but even to charge the same disproportionably, and in an unequal manner, in order to ease the estates of others, which is a measure we are by no means willing to consent to; and as the present invasion of his majesty's American dominions, may make it necessary to raise further supplies for his service in our said province, the assembly may hereafter propose and offer bills or acts of assembly, to lay additional taxes on real estates there; you are, therefore, hereby required and directed, not to give your assent to any bill or act of assembly of that sort, unless the act be made to continue for one single year only, and no longer," &c.

Here follows a variety of prescriptions and prohibitions; some plausible; some artificial; and all serving as a shoeing-horn to the great one of all, the exemption of the proprietary quit-rents, which was to be rendered as express as possible.

That, however, they may not appear altogether intractable, one concession is made towards the conclusion, which is worth more perhaps than they supposed; as it contains a tacit acknowledgment that, in equity, they ought to be taxed like the rest of their fellow-subjects, and yet less than them they would have it understood; such estates of theirs, as come within that description, not being like to produce such a sum as deserved to be made a provincial object; and the introductory part of the paragraph, as may be collected from the famous contest between them and the assembly concerning Indian expenses, justly drawing the whole into suspicion.

This is the paragraph. *Valeat quantum valere potest.*

"And whereas we are, and always have been, most ready and willing to bear a just proportion along with our tenants in any necessary tax for the defence of the said province, which shall be equally laid upon the lands of the inhabitants, and also upon any of our manors or lands which are actually let out on leases, either for lives or years, as being estates in some degree like to those of which the inhabitants are possessed; therefore you are at liberty to give your consent to any reasonable bill or act for that purpose, provided the tax to be paid for such our last mentioned estates, shall be payable by the tenants and occupiers, who shall deduct the same out of the rents payable by them to us."

It is remarkable, that through the whole, the language is such as could indeed become none but an absolute proprietary; all dictatorial; all in chief, as lord paramount; as if there was no king in Israel, nor any interest worthy consideration, but the proprietary interest; as if there was no occasion for royal instructions, or as if it was impossible any such should interfere with theirs; and as if the provincial legislature was a nose of wax to be twisted into what shape they pleased.

Such were these instructions: and as to their effect in the house, it was such as was naturally to be expected; they saw a contro-

versy without end before them, productive in its way of all manner of calamities public and private, and to be prevented or shortened only by a submission equally ruinous.

They saw this; and it threw them into agonies, though not into despair.

The first expedient they made use of was the following message to the governor:

"*May it please the Governor,*

"The house have taken into their most serious consideration the proprietary instructions relating to the passing of money-bills, which the governor has been pleased to lay before us; and as we are fully convinced the present unhappy circumstances of this province require very large and immediate supplies, we have likewise considered the funds whereby such sums as we judge absolutely necessary for the security of the province may be sunk; but every thing we have hitherto been able to propose, must be rendered in great degree fruitless by those instructions, if adhered to.

"We therefore request the governor would be pleased to inform us, whether he does not apprehend himself at liberty, notwithstanding the said proprietary instructions, to pass such equitable bills as we may offer him, if consistent with his own judgment, and agreeable to such laws as have been enacted by his predecessors, and received the royal assent."

To this the governor answered,

"*Gentlemen,*

"I am very glad to hear the house have taken the money-bills into their serious consideration, and the proprietary instructions on that subject.

"It would be with great reluctance, especially at this time, if I should differ in sentiments with the house of representatives. You will be pleased to observe how I am circumstanced, and that I cannot recede from my instructions without risking both my honour and fortune, which, I am persuaded, you, gentlemen, are too equitable to desire."

A bill for striking the sum of sixty thousand pounds, in bills of credit, and giving the same to the king's use, and for providing a fund to sink the same, by laying an excise on wine, rum, brandy, and other spirits, was the result; ten thousand pounds of which was appropriated as the quota of the province to the general fund for the common service and defence of the colonies, and rendered subject to the orders of the earl of Loudon; ten thousand pounds to discharge the debt contracted by the province for the provisions furnished for the expedition against Crown-point; which debt had been unavoidably incurred, and could no otherwise be discharged; no part of the hundred and fifteen thousand pounds, granted by parliament for the colonies, having been allotted to Pennsylvania; and the residue, after paying such debts as had been contracted since the expenditure of the fifty-five thousand pounds, was destined for the current service, as the managers appointed by the said act, with the consent and approbation of the governor, and not otherwise, should direct.

When the said bill was presented to the governor, he made use of the answer of course, that he would give it all the despatch in his power; but afterwards he gave them notice by message, that difficultes had arisen; and that he desired a conference with a committee of the house, in order to a discussion of them.

A committee was ordered accordingly; at which (Sept. 13) the governor was pleased to express himself to the following purport, viz.

"That although, at the request of the house, he had laid the proprietary instructions before them with the utmost candour, yet he was surprised to find there was a clause in the bill now before him, whereby the surplus-money (if any) was to be in the disposition of the assembly, contrary to the said proprietary instructions; that the term for sinking the sum granted to the king's use was too long, and would depreciate the value of the currency; that so long a time was contrary to the sense of the ministry, and the spirit of the act of parliament, which restrains the eastern colonies from striking bills of credit for any longer term, even upon the most pressing emergencies, than five years only; that in the report of the board of trade on the act passed by this assembly for granting sixty thousand pounds to the king's use, the chief reason their lordships urged for not advising his majesty to disallow that act, was the shortness of the time for sinking the same; and that there were many ways to sink the sum granted to the king's use, by the present bill, without extending the excise for so long a time."

At the request of the committee he also gave them the heads of his objections in writing; namely,

1. To the length of the term of twenty years for sinking the said sum, as it might endanger the entire loss of the currency; and as the lords of trade had assigned the shortness of the time prescribed in the sixty thousand pounds act, as their reason for advising his majesty to give his assent to it. 2. To the disposition of the surplus-money by the assembly alone. 3. To the subjecting the ten thousand pounds given as a contribution to the general fund, to the order of lord Loudon only, and not of the commander-in-chief for the time being. 4. To the application of any part of the money to the discharge of the ten thousand pounds given for the use of the Crown-point expedition, as the said sum was issued upon a fund already established.

His other objections, being of a less general nature, need not to be specified. And in the close of all, that he might be thoroughly un-

derstood, he farther chose to express himself as follows; to wit, "that he had had several applications made to him from the frontier, requesting the aid of the legislature in their present distressed circumstances; that the eyes of the neighbouring colonies were upon them; and above all, that the nation of England were in expectation of their granting the necessary supplies for the king's service; that he was sorry to find the first bill offered to him should be such as he could not pass; and that he hoped they would so conduct themselves, as that he might make a favourable representation of their conduct to his majesty."

The house, on the other hand, having taken these objections into consideration, appointed a committee to collect the sense of the house in answer to them, which upon the report was approved, and sent up to the governor by the committee of conference.

And this answer, so far as regards the objections above stated, can be given in no terms so apposite as their own, viz.

"1. The house chose, at this time, an excise bill rather than a land-tax bill, to avoid any dispute about taxing the proprietary estate, and because, as it was a mode of raising money they were used to and understood, the bill might more speedily be formed and brought to effect, so as to answer the present pressing emergency; and being in the same form with a number of preceding excise bills, that had been passed by former governors, gone through the offices at home, and received the royal assent; they well hoped it might meet with no objections.

"The last time it passed, the term was ten years. No inconvenience arose from the length of that term. Could we have sunk the sum we wanted by the excise in that term, we should not desire to extend it. But we expect it will not yield more in twenty years than the sixty thousand pounds granted. The act of parliament made for the eastern colonies, is not in force here. Had the parliament thought it fit that this province should be governed by that act, they would not have excluded Pennsylvania out of the bill, as they actually did. Governor Hamilton had formerly offered to extend the excise to any term, during which we would load it with three thousand pounds per annum, granted to the crown. From whence we concluded the term of twenty years would not be objected to, sixty thousand pounds being granted.

"Other taxes or excises on other consumptions might possibly be laid, but we have no experience of them; they will require a time of more leisure to be well considered, and laws for collecting them properly formed, so as to be effectual, and not injurious to our trade. If this war continues, we may soon want them all; and the succeeding assembly may take those matters in hand immediately after their meeting, so as to have such new excises ready before the money now granted is expended; though we still think a well proportioned tax on property, the most equal and just way of raising money.

"If every man who received our bills of credit in payment, was obliged to keep them in his hands till the end of twenty years, to be sure the length of the term would occasion a proportionable depreciation. But they being a legal tender in all payments, and the possessor able to exchange them immediately for their value, it is not length of term, but excess of quantity, that must occasion their depreciation; and that quantity is by this bill yearly to diminish. Besides, the eighty thousand pounds we have out on loan, is not to sink in the next six years, which will greatly lessen our currency, and consequently lessen the danger of the depreciation.

"If the quantity should prove too great, which we believe it will not, a subsequent act, laying excise or duty on other commodities, increasing the duty per gallon, raising it also from private consumption, or obtaining money by any other means for the public service, may be made, and the money applied to the more speedy sinking this sixty thousand pounds.

"2. There will probably be little or no surplus left to the disposition of the assembly. People now leave the province faster than they come into it. The importation of Germans is pretty much over. Many go from us to settle where land is cheaper. The danger attending frontier settlements will probably be long remembered, even after a peace may be restored. And if our inhabitants diminish, the excise will be lessened instead of being increased. At its best, it produces, *communibus annis*, not more than three thousand pounds per annum.

"In former excise laws the assembly have had the disposition of the whole. They preserved the public credit; paid all public debts punctually every year; and have not abused the trust reposed in them.

"The instruction is not a royal but proprietary instruction, calculated to establish arbitrary government among us, to distress the assembly and people, and put it out of their power to support their complaints at home. It would, moreover, deprive us of a just right and privilege, enjoyed from the first settlement of the country.

"3. Lord Loudon is a nobleman distinguished by the great trust the crown hath placed in him. We have likewise received a high character of his integrity and uprightness, which induces us to confide in him. The chance of war (which heaven prevent) may, after several removes, give him a successor unknown to us. If it should be found necessary and convenient before the money is ex-

pended, the governor and assembly can at any time, by a little act, subject the remainder to the order of his successor, the commander-in-chief for the time being.

"4. It is true, there was a fund appropriated to sink the notes issued for the grant to the Crown-point expedition. That fund in a great measure fails by the loss of one whole county to the enemy, and the abandoning considerable parts of other counties, where lands mortgaged to the loan-office are situated. The whole sum was appropriated to the king's service. And if those notes had not been issued, that assistance could not have been given, as our affairs were then circumstanced. They cannot be redeemed in due time by that fund, without adding to the distresses of the people, already too great; and the public credit ought to be kept up, as it may be wanted on some future emergency. Besides, those notes bear interest, and at this time the province is less able than ever to pay interest. We should now save money by all means in our power."

"10. The fund appropriated for sinking the five thousand pounds, given for the Canada expedition, was broke in upon by the late extraordinary demands for public money. Five thousand pounds was given in provisions to general Braddock, and near four thousand pounds more to cut a road for the king's service at the instance of that general; besides large sums for the maintenance of Indians, extraordinary and expensive treaties, &c. not expected or foreseen when the fund was laid. It may therefore fall short, and the outstanding debts not pay the whole; but, however, the public credit ought to be supported; and the new laid excise is the most proper fund to supply deficiencies in the old.

"The house cannot be supposed insensible of the distresses of their fellow-subjects on the frontiers. Several of the members reside there. They hoped they had in this bill provided for those people the means of speedy assistance, and avoided all objections. They see none now of importance enough, in their opinion, to prevent the passage of the bill.—They grant the money freely to the king's use, and cannot admit of amendments to a money-bill; they therefore persuade themselves, that the governor will consider the present circumstances of the province, and the consequences of dispiriting the inhabitants, by depriving them at this time of their privileges, without which they would think the country scarce worth defending; and that he will not suffer a proprietary instruction, new, unjust, and unseasonable, to deprive his majesty of a grant so large, so freely given, and so necessary for his service; and for the preservation of the proprietary estate, as well as the securing the lives and fortunes of the inhabitants, who promised themselves great happiness, in being placed immediately under his care and protection."

The kings of Great Britain have a negative on laws as well as the deputy-governors of Pennsylvania; but then they use it as rarely as possible; and when they do, they rather demur than refuse; but the deputy-governor of Pennsylvania, having no such managements to observe, thought the peremptory style the best; and so sent down the secretary with a verbal message, which is entered in the minutes of the province in these words:

"Sir, the governor returns the bill, entitled, 'an act for striking the sum of sixty thousand pounds, in bills of credit, and giving the same to the king's use, and for providing a fund to sink the bills so to be emitted, by laying an excise upon wine, rum, brandy, and other spirits.' And his honour commands me to acquaint the house, that he will not give his assent to it; and, there being no person to judge between the governor and the house in these parts, he will immediately transmit to his majesty his reasons for so doing."

The remainder of that day (the 15th) as it may be surmised, was wasted in a vain discussion of the difficulties they were involved in; for the house broke up without coming to any resolution. The next was a blank likewise; no business was done; but, on the third, having resumed the consideration of the governor's objections to their bill, the committees report thereupon, the governor's verbal message refusing his assent to the said bill, and the proprietaries' instructions, prescribing to the representatives of the freemen of the province, the modes of their raising money for the king's service, they came to the following resolutions, to wit:

"That the said proprietary instructions are arbitrary and unjust, an infraction of our charter, a total subversion of our constitution, and a manifest violation of our rights, as freeborn subjects of England.

"That the bill for granting sixty thousand pounds to the king's use, to which the governor has been pleased to refuse his assent, contains nothing 'inconsistent with our duty to the crown, or the proprietary rights,' and is agreeable to laws which have been hitherto enacted within this province, and received the royal approbation.

"That the right of granting supplies to the crown is in the assembly alone, as an essential part of our constitution, and the limitation of all such grants as to the matter, manner, measure, and time, is only in them.

"That it is the opinion of this house, that the many frivolous objections, which our governors have been advised from time to time, to make to our money-bills, were calculated with a view to embarrass and perplex the representatives of the people, to prevent their doing

any thing effectual for the defence of their country, and thereby render them odious to their gracious sovereign, and to their fellow-subjects, both at home and abroad.

"That the proprietaries increasing their restrictions upon the governor, beyond what they had ever done before, at a time when the province is invaded by the king's enemies, and barbarous tribes of Indians are ravaging the frontier settlements; and their forbidding the passing of any bills whereby money may be raised for the defence of the inhabitants, unless those instructions are strictly complied with, is tyrannical, cruel, and oppressive, with regard to the people, and extremely injurious to the king's service; since, if the assembly should adhere to their rights, as they justly might, the whole province would be thrown into confusion, abandoned to the enemy, and lost to the crown.

"The house, reserving their rights in their full extent on all future occasions, and protesting against the proprietary instructions and prohibitions, do, nevertheless, in duty to the king and compassion for the suffering inhabitants of their distressed country, and in humble but full confidence of the justice of his majesty and a British parliament, wave their rights on this present occasion only; and do further resolve, that a new bill be brought in for granting a sum of money to the king's use, and that the same be made conformable to the said instructions."

By this new bill, both the sum and the time was reduced one half; that is to say, the sum to thirty thousand pounds, and the time for raising it, by excise, to ten years. The bill was immediately prepared and read, and the next day was sent up to the governor, who, on the 20th, condescended to signify, that he was ready to pass the same into a law, provided, a clause therein relating to the fines and forfeitures, being paid into the treasury, was first struck out; which, on account of the present exigency of affairs, having been also agreed to by the house, the said bill was, on the 21st of September, passed accordingly into a law.

Under these circumstances, in this manner, and for these considerations, had governor Denny the honour to extort this proprietary sacrifice from these honest, considerate, able, spirited men, who had stood in the gap for so many years, and who had never been driven out of it, if it had been possible for them to have saved their country and its constitution too.

To the cruelty of the conjuncture alone they gave way; not to any superiority of reason in their adversaries, nor through any failure of integrity or fortitude in themselves.

Of this a sufficient testimonial remains still to be given out of their minutes; wherein are to be found (and it is to be hoped will for ever remain) the remarks of the committee by order of the house, on the proprietaries' instructions, already before the reader, which contain as full a vindication of themselves and their conduct, as is in the power of thoughts and words to express; and consequently as full an exposition of the claims and demands brought against them.

Too long, however, is this performance to be given in the entire; more especially in the close of so long a narration; and too significant is it to admit of any abridgment; to the appendix, therefore, the reader must be referred, if he has a curiosity to see it; where it is lodged, as a requisite without which neither his entertainment nor his information could be complete.

It will suffice to say in this place, that it was unanimously approved of and agreed to by the house; and that the house was unanimous also in resolving "that it was highly necessary, a remonstrance should be drawn up and sent home, setting forth the true state of Pennsylvania, and representing the pernicious consequences to the British interest, and to the inhabitants of that province, if contrary to their charters and laws, they were to be governed by proprietary instructions."

The true state of Pennsylvania is now before us. It is apparent the assemblies of that province have acted from the beginning on the defensive only; the defensive is what every man, by the right and law of nature is entitled to. Jealousy is the first principle of defence; if men were not to suspect, they would rarely, if ever, be upon their guard.—*Magna Charta* is apparently founded upon this principle; nay, provides, that opposition should be always at hand to confront and obviate danger. Penn, the founder of the colony, founded it upon *Magna Charta;* and, as we have seen, the birthrights of his followers were rather enlarged than diminished by his institutions. That the latter part of his active life, therefore, was employed in undermining his own foundations, only serves to excite our concern, that so few should be of a piece with themselves; and to make him answerable in part for the trespasses of his heirs.

Fatally verified, however, we see, both there and every where else, the fable of the axe, which having been gratified with as much wood only as would serve it for a handle, became immediately the instrument to hew down the forest, root and branch, from whence it was taken.

It is as apparent, on the other hand, that these proprietaries have acted an offensive part; have set up unwarrantable claims; have adhered to them by instructions yet more unwarrantable; have availed themselves of the dangers and distresses of the province, and made it their business (at least their deputies have) to increase the terrors of

the times, purposely to unhinge the present system; and, by the dint of assumptions, snares, menaces, aspersions, tumults, and every other unfair practice whatsoever, would have either bullied or wheedled the inhabitants out of the privileges they were born to; nay, they have actually avowed this perfidious purpose, by avowing and dispersing those pamphlets in which the said privileges are insolently, wickedly, and foolishly pronounced repugnant to government, the sources of confusion; and such as, having answered the great end of causing an expeditious settlement, for which alone they were granted, might be resumed at pleasure, as incompatible with the dictatorial power they now challenge, and would fain exercise.

And this being the truth, the plain truth, and nothing but the truth, there is no need to direct the censures of the public; which, on proper information, are always sure to fall in the right place.

The parties before them are the two proprietaries of a province and the province itself. And who or what are these proprietaries? in the province, unsizeable subjects and unsufficient lords. At home, gentlemen, 'tis true, but gentlemen so very private, that in the herd of gentry they are hardly to be found; not in court; not in office; not in parliament.

And which is of most consequence to the community;—whether their private estate shall be taxed, or the province shall be saved?

Whether these two private gentlemen, in virtue of their absolute proprietaryship, shall convert so many fellow-subjects, born as free as themselves, into vassals? or, whether so noble and useful a province, shall for ever remain an asylum for all that wish to remain as free as the inhabitants of it have hitherto made a shift to preserve themselves?

Sub judice lis est.

What part the offices here at home have taken in this controversy, it will be time enough to specify when 'tis over; and appeals respectfully made argue a presumption, that right will be done.

But one circumstance more, therefore, remains to be added in behalf of this persecuted province, which is the testimonial of commodore Spry, contained in the following extracts from two of his letters to one Mr. Lovel, a gentleman of Philadelphia, and by him communicated to the speaker of the assembly, to wit:

"*August* 5, 1756.

"'Tis impossible to conceive how much I am obliged to the gentlemen of Pennsylvania for their ready concurrence in supplying his majesty's ships in North America with such a number of seamen, at their government's expense; and I must entreat you to make my most grateful acknowledgments to your speaker, and the rest of the gentlemen concerned in it."

"*August* 7, 1756.

"I have joined Mr. Holmes, and we are now under sail, with a fair wind, for Louisburg. Last night a ship luckily arrived with twenty-nine seamen more from the people of your good province; God bless them! I shall ever greatfully remember and acknowledge it. I have the seamen all on board my own ship, except four that are sick at the hospital."

APPENDIX;

CONTAINING

SUNDRY ORIGINAL PAPERS,

RELATIVE TO THE SEVERAL POINTS OF CONTROVERSY BETWEEN THE GOVERNORS AND ASSEMBLIES OF PENNSYLVANIA.

To the Honourable Thomas Penn and Richard Penn proprietaries of the province of Pennsylvania, &c.

The representation of the General Assembly of the said Province, met at Philadelphia, the 23d day of the sixth month, 1751.

MAY IT PLEASE THE PROPRIETARIES:—The first settlers of this province unanimously concurred with your worthy father, to lay the foundation of their settlements, in doing justice to the native Indians, by coming among them as friends, upon an equitable purchase only: this soon appeared to be the best and safest way to begin the infant settlement, by the veneration and love it procured from those people, who kindly supplied the wants of many, then destitute of the necessaries of life; and, as the settlements increased, retired to make room for their new guests, still preserving that esteem and veneration which had been so strongly impressed upon their minds. By this voluntary retreat, all were satisfied, for there was room enough for all; and the good faith so carefully kept with those who were nearest, gave the more distant Indian nations that favourable opinion of us, which our continuing to act on the same principles of justice hath supported to this day; they entered freely into our alliance; they became the guards of our frontiers against the French, and French Indians, by obliging them to observe a neutrality towards us, as we experienced during the course of the last war; and we have reason to think we now share largely in their affections. But this beneficial friendship hath neither been procured nor continued without a very great expense to the people of this province, especially for some years past, wherein we find the assemblies opened their hands liberally to all the purposes of peace, among those who could best, under God, preserve our distant settlements against the depredations of an active and powerful enemy; without strictly inquiring at that time, how far the people alone ought to bear the burden of those expenses. But as that burden became yearly more and more heavy, the assemblies were naturally led to request the assistance of the proprietaries, and we hoped an application so apparently reasonable might have their approbation. We are therefore much concerned to receive an answer so different from our expectations, in which the proprietaries are pleased to say, "that they do not conceive themselves under any obligation to contribute to Indian or any other public expenses, even though taxes were laid on the people for the charges of government; but as there is not one shilling levied on the people for that service, there is the less reason for asking any thing of them. Notwithstanding which, they have charged themselves with paying to the interpreter, much more than could be due to him on any treaties for land, and are at this time at the expense of maintaining his son, with a tutor, in the Indian country, to learn their language and customs for the service of the province, as well as of sundry other charges on Indian affairs. That they have been at considerable expense for the service of the province, both in England and here; that they purchase the land from the Indians, and pay them for it; and that they are under no greater obligation to contribute to the public charges than any other chief governor of any of the other colonies."

Upon which we beg leave respectfully to represent to our proprietaries, that the preserving a good understanding with the Indians, more particularly advances the interest and value of the proprietary estate than that of any other estate in the province, as it gives the proprietaries an opportunity of purchasing at a low price, and selling at high rates, great tracts of land on the frontiers, which would otherwise be impracticable. That therefore, though they may conceive themselves under no obligation by law, they are under the much stronger obligations of natural equity and justice, to contribute to the expense of those Indian treaties and presents, by which that good understanding, so beneficial to them, is maintained. That although formal taxes have not been laid in this province during some years past, for the support of the proprietaries' lieutenant-governor, and defraying the charges of Indian treaties, yet the interest of our paper-money is a virtual tax on the people, as it arises out of, and is paid by, their labour, and our excise is a real tax, yielding about three thousand pounds per annum, which is principally expended in those services, besides the tax of licenses of various kinds, amounting to considerable sums yearly, which have been appropriated wholly to the support of the governor. That the assemblies of this province have always paid the accounts of our Indian interpreter for his public services to his full satisfaction; and we believe future assemblies will not fail to do, in that respect, what may reasonably be expected from them,

when his son shall be thought qualified to succeed him. Nor do we doubt their discharging all just debts, for expenses properly chargeable to the province, whether made here or in England, whenever the accounts are exhibited. We are nevertheless thankful to our proprietaries for their care in our affairs, and their endeavours to provide a well qualified successor to our present interpreter, as such a one may be of service to the public, as well as to the private interests of their family.

We would farther entreat our proprietaries to consider, that their great estate not lying in Britain, is happily exempt from the burdens borne by their fellow-subjects there, and cannot, by any law of ours, now in being, be taxed here. That therefore, as they are not obliged, on account of that estate, to bear any part of the charge of any war the British nation may be involved in, they may with us more freely contribute to the expense of preserving peace, especially on the borders of their own lands, as the value of those lands so much depends upon it.

We beg leave further to observe to our proprietaries, that the act forbidding all others to purchase lands of the natives, establishes a monopoly solely in their favour; that therefore they ought to bear the whole charge of treaties with the Indians for land only, as they reap the whole benefit. And that their paying for land (bought, as we conceive, much the cheaper for the provincial presents accompanying those treaties) which land they sell again to vast advantage, is not a satisfactory reason why they should not bear a part of the charge of such other treaties, as tend to the common welfare and peace of the province.

Upon the whole, since the proprietaries' interests are so constantly intermixed, more or less, with those of the province, in all treaties with our Indian allies; and since it appears that the proprietaries think they already pay more than their share, and the people (who have disbursed near five thousand pounds within these four years, on those occasions) think they pay abundantly too much; we apprehend that the surest way to prevent dissatisfaction on all sides, will be, to fix a certain proportion of the charge of all future provincial treaties with the Indians, to be paid by the proprietaries and province respectively; and this, we hope, they will on further consideration agree to, not only as it is in itself an equitable proposal, but as it may tend to preserve that union and harmony between the proprietaries and people, so evidently advantageous to both.—Signed, by order of the house,

ISAAC NORRIS, *Speaker*

The Proprietaries' answer to the foregoing representation of the House of Representatives. Laid before the house, May 23, 1753.

GENTLEMEN,

1. The true and real interest of the people whom you represent is, as it ought to be, the principal object of our concern; we shall on all occasions, show them that we have it constantly in view; we will use our utmost endeavours to procure it, at the expense of our own private fortunes, whenever it appears to us necessary; and, in considering the matter of your representation, shall endeavour to act such a part as would be thought just, by persons wholly disinterested, both with regard to us and them.

2. That the representatives of the people are not so disinterested, seems most certain; wherefore, supposing they saw this matter in a light very different from that in which it appears to us, and that they were not actuated by any inclination on the one hand to oppose our interest, or on the other to influence the weaker part of the electors by appearing zealous for theirs (which we would trust and hope is the case) yet we may continue to differ in sentiments from them on the necessity of the desired assistance, without being liable to any imputation of neglecting the interest of the province in the opinion of the world.

3. After we had ordered our governor to give you the answer, which he did, to your former application, we had no reason to expect a repetition of the application directly to ourselves; as you might well suppose, we had considered the matter before we had returned our first answer, and the repeating the request could only produce the repeating the answer; the occasion for which does not appear to us. It is possible, that one purpose may be, in order to show, more publicly, this difference in opinion between us and yourselves; and if that was ever intended, it will be convenient that we should set this matter in a clear light (although it may make our answer longer than we could wish) that the true state of the matter may appear.

4. We did not speak our own sentiments only when we before said, we were under no greater obligation to contribute to the public charges than any chief governor of another colony; that was the opinion of the lords of trade, when, upon an application made to the king, by many considerable inhabitants of the province, that he would be pleased to give some orders for their defence; the counsel, employed by the agent of the house of representatives, insisted, that, if any such preparations were necessary, the proprietaries ought to be at the expense of them; but their lordships declared it their opinion, that we were not obliged to be at any expense of that nature, more than any other governor-in-chief of the king's colonies.

5. We are sensible that our honoured father, in the first settlement of the province, and at all times after, was strictly careful to do justice to the Indians, and purchased land from them before it was settled; but, we believe, always at his own charge; at least we do not find a single instance of a purchase having been made at the expense of the people. So that what share they had in such purchases, we are at a loss to know, other than the benefits and conveniences which arose from the mutual exchange of friendly offices with the natives.

6. Had the necessary public charges amounted to more than the revenue of the province, and a general tax been laid on the people to defray the same, there might then have been some colour to desire that we should contribute; but as no such tax has, for very many years, been or need to be laid, and the charge of government amounts to little more than the one half of the common and ordinary revenue, the pressing thus unseasonably for our contribution, appears, we conceive, as an attempt to induce the weakest of the people to imagine yourselves to have an uncommon regard to their interests, and to be therefore the most proper persons to be continued as their representatives;

and the matters which might the rather induce us so to think, are the solemn repetition of this request, and treating it as if it was a matter of great value and consequence; the time of making your last representation, just before an election; and the printing the report, and most extraordinary resolutions, which were the foundation of such your representation, in your votes, long before your address could, by any possibility, come to our hands; which are such matters as could not escape our observation, and which would almost persuade us, that it was intended as an address to the people, rather than to us.

7. Wherefore, on this occasion, it is necessary that we should inform the people, through yourselves, their representatives, that as, by the constitution, our consent is necessary to their laws, at the same time that they have an undoubted right to such as are necessary for the defence and real service of the country; so it will tend the better to facilitate the several matters which must be transacted with us, for their representatives to show a regard to us and our interest: for, considering the rank which the crown has been pleased to give us in Pennsylvania, we shall expect from the people's representatives, on all occasions, a treatment suitable thereto; and that, whilst we desire to govern the province according to law only, they should be as careful to support our interests, as we shall always be to support theirs.

8. We are truly concerned, that you lay us under the necessity of acquainting the public with the state of the revenue of the province; you have in part, done it already, by acknowledging the amount of the excise to be three thousand pounds a year. The interest of the paper money, as we conceive, is more than that sum, which makes the common revenue of the province above six thousand pounds a year; the annual expense of government for a series of years (including Indian charges) amounts to little more than half that sum; the interest is paid by people who, no doubt, find greater advantage in the use of the money than the interest they pay for it, otherwise they would not be so solicitous to be admitted to borrow as they always have been. That interest money therefore cannot, with any propriety, be called a tax laid on the province, or a burden on the inhabitants. The excise itself is not a general tax, to which all the inhabitants must contribute, as it is paid by such only who buy wine and spirituous liquors, under certain quantities; so that many people pay nothing of that tax. Of all this revenue, about four hundred pounds a year has, on an average, for twenty years past, (and great part of that time during war) been expended in presents to the Indians, and charges on their account; which we cannot conceive to be a large sum, in proportion to the revenue of the province, for so great and important a service as that of keeping the united nations of Indians in the interest of Great Britain; we believe every disinterested person will think the sum very small, and, from the manner of its being raised, not at all burdensome to the people; besides which, had not half that money been expended on these accounts, it is most certain all the same excise would have been paid.

9. The whole sum paid, in twenty years, for Indian services, is not more than, on a common computation, our family has paid, in the same time, for duties and excises here, for the support of his majesty's government; and which we choose to mention, in answer to that part of your representation, wherein you, unadvisedly, publish to the world, that our estate in America is exempted from the burdens borne by our fellow-subjects in Great Britain; such matter might much more properly have been avoided; and at the same time that we show you, that we do pay all other taxes here, that on land only excepted, we must advise you to be very careful, not to put people here in mind of that single exemption. Several proposals have been made for laying taxes on North America, and it is most easy to foresee that the self-same act of parliament that shall lay them on our, will also lay them on your estates, and on those of your constituents.

10 We cannot allow that you have always paid your interpreter to his satisfaction, because we know we have charged ourselves with gratifications to him, when the assembly has refused to pay him what he thought his services deserved; and we make no doubt he can remember such instances; however, with respect to any expenses of that sort, and many others here, we entered into them without any expectation of being repaid, and should think it far beneath us to send the accounts of them to the house of representatives, as your agent, employed by yourselves, might do for the expenses incurred by him. What we might reasonably expect, is, a thankful acceptance of our endeavours to serve the public; and if you do not think proper to make even that return, we shall, nevertheless, be fully satisfied with the consciousness of having rendered the province all the services in our power.

11. We do not conceive that any act of assembly does, or can establish, what you call a monopoly in us for the purchase of lands; we derive no right or property from any such law. It is under the king's royal charter that we have the sole right to make such purchases; and it is under that same charter, that every settler has a right, through us, to the estate he possesses in the province. The act itself, which you seem to allude to, acknowledges this right to be so granted to us by the charter, and is only declaratory thereof to the people, advertising them of a certain truth, that they are liable according to the laws of Great Britain, to penalties for contravening such right.

12. Your assertion, that treaties for land are made at a less expense to us, on account of provincial presents being given at the same time, does not appear to us to be founded on fact; the last purchase was made on no other account, but purely to save the province the expense of making another present to some Indians who came down after the time that the principal deputation had received the presents intended for the whole, and were on their return back; and the land was bought very dear on that account. Other treaties for land have been made when provincial presents have not been given; and we do not, or ever did, desire, that the inhabitants should bear any part of the expense of Indians who came down solely at our request to consent to the sale of lands, unless they stay on other public business also; and whenever they have come down on both accounts we are sensible the expense has been divided in a manner very favourable to the public.

13. We are far from desiring to avoid contributing to any public expense, which it is reasonable we should bear a part of, although our estate is not, by law, liable to be taxed. As we already

have been, so we doubt not we always shall be, at a far greater expense in attending the affairs of the province, than our estate could be taxed at, if all the estates in the province were rated to the public charges, which would be the only fair way of establishing a proportion. If we were willing to consent to any such matter, the value of our estate, and of the estates of all the inhabitants, ought to be considered, and the whole expense proportionably laid upon the whole value; in which case you would find, that the expense which we voluntarily submit to, out of affection to the inhabitants, is much more than such our proportion so laid would amount to; besides these general expenses, the first of us sent cannon at his own charge, to the amount of above four hundred pounds sterling, for the defence of our city of Philadelphia, neglected by a late house of representatives; which alone, is such a sum as the proportion of a tax on our estate would not in many years amount to. And as this is the case, we are not disposed to enter into any agreement with the house of representatives for payment of any particular proportion of Indian, or other public expenses, but shall leave it to them (to whom it of right belongs) to provide for such expenses, as they shall judge necessary for the public service.

14. As you desire to appear willing, on your parts, to ease your constituents of a small part of the Indian expense, by throwing it upon us, we shall, on our part, and hereby do recommend it to you, to give them a real and far greater relief, by taking off a large share of that only tax which is borne by them. As the general expense amounts to little more than three thousand pounds a year, we conceive it may very well be provided for out of the interest of the paper-money, and one half of the present excise; especially if we shall be induced, from the state of your trade (which we expect soon to receive) to consent to an increase of your paper-currency, this would ease the inhabitants of about fifteen hundred pounds a year, which would be felt by many of them, when they would not be sensible of the trifle you propose we should contribute to the public expenses. We have directed the governor to consent to such a law when you shall think fit to present it to him.

15. As we shall ever in the first place endeavour to promote the real interests of the good people of Pennsylvania, we make no doubt of preserving an union and harmony between us and them, unless men of warm or uneasy spirits should unhappily procure themselves to be elected for representatives, and should for the supporting their own private views, or interests, influence their brethren, otherwise honest and well designing, to espouse their cause; in such case, indeed, disputes may arise, wherein we shall engage with the utmost reluctance; but even then, as we shall make the general good the rule of our actions, we shall, on all such occasions, if ever they should happen, steadily, and without wavering, pursue measures the most likely to conduce to that good end.

16. The representatives being annually chosen, we are aware that we are not writing now to the same persons who sent the representation to us; the persons most forward to push on a measure which, from the answer, we directed our governor to give to the former application he was desired to make to us, must be supposed disagreeable) may not now be in the house, but may be succeeded by more prudent persons, returned for their places, who would be careful not to press a matter too far, in which the rights of the people are not really concerned; however, the answer we give must be to the representation sent us. And we desire, in any matter of the like nature, that the house will be satisfied with such an answer as the governor may have orders to give on our behalf

THOMAS PENN,
RICHARD PENN.

Report on the Proprietaries' answer, &c.

In obedience to the order of the house, your committee have considered the representation made by a former assembly to the proprietaries, concerning Indian affairs, with their answer delivered to this house; and since all further application to the proprietaries on the subject of that representation is now forbidden, and they seem to require that their answer should be put on the minutes of assembly, we are of opinion that the representation not hitherto made public, should accompany it, with such of the following remarks made on each paragraph of the said answer as the house shall think proper.

1. On the first paragraph of the answer, we shall just observe, that the declaration it contains is a noble one, and worthy of the rank our proprietaries hold among us; we only wish that in the present case they had thought fit to give a proof of the sincerity with which it is made, such as would have been satisfactory to others, since our assemblies are esteemed interested judges.

2. The insinuation in the second paragraph, as if the assembly were actuated by an inclination to oppose the proprietary interests, we look upon to be injurious; and as groundless as the other supposition, that the members might have in view their future election, of which we shall take farther notice when we come to the sixth paragraph, where it is again repeated. No instance can be given of that assembly's opposing, or attempting to oppose, the proprietary interest. It rather appears that they thought they were consulting those interests in the very point in question, if it be consistent with the proprietary interest to have a good understanding with the people; since the representation expressly proposed a method of preventing misunderstandings for the future.

3. In the third paragraph, the representation is treated as a mere repetition of a former application, and therefore improper, as "repeating the request could only produce the repeating the answer;" but the representation appears to your committee to contain, not only a repetition of the request, but new reasons in support of it, and answers to such as had been given for refusing it. And such a repetition of an application we think justifiable in all cases; except where we can be sure that the first thoughts of the persons applied to, are infallibly right; or if wrong, that they are incapable of hearing reason.

4. With regard to the opinion said to be declared by the lords of trade, "that our proprietaries were no more obliged to contribute to public charges than any other governor-in-chief of the king's colonies;" your committee presume to suppose their lordships could only mean, that as governor-in-chief the proprietaries were not obliged by law; and not, that as proprietaries they were not obliged in equity. The latter is the point at present in dispute between the proprietaries and people of Pennsylvania, though in this paragraph evaded.

The assembly mention no other obligation but such as in their opinion arises from reason and justice; they humbly submit their reasons to the proprietaries' consideration, and from their equity only, they hope a compliance with the request. The position understood as the proprietaries would understand it, must as well hold good among the governed as the governors of the colonies; for should the wealthiest inhabitant say, he ought to pay no more towards public charges than any other inhabitant, he would be right, considering him merely as an inhabitant; but as a possessor of property, he would be wrong; and therefore laws are made, obliging such as would not otherwise be just, to pay in proportion to their substance.

5. The fifth paragraph seems intended to combat an assertion, that the purchases from the Indians were made with the people's money. As we find no such assertion in the representation, we do not think it necessary at present to inquire how far, or in what instances, the people have had a share directly or indirectly in any such purchases. The representation only intimates, that the house conceived, treaties for the purchase of land were made on more reasonable terms to the proprietaries for the provincial presents accompanying such treaties: and that this was an additional reason why the proprietaries should bear a proportionable part, at least, of the expense of such presents; since, besides their share of "the common benefits and conveniences, which arise from the mutual exchange of friendly offices with the Indians," they reap a particular advantage to themselves, and that a very considerable one. This reason we apprehend is not answered in the present paragraph; it is only evaded, by changing the state of the question. A subtlety, in our opinion, unworthy the dignity of the proprietaries and chief governors of a province.

6. On the sixth paragraph we would observe, that the request to the proprietaries, that they would be pleased to bear a part of Indian expenses, was founded on the supposed equity of the case; and that they would consent to settle the proportion to be paid by them, was proposed as a means of preventing dissatisfactions between them and the people. To these points, this paragraph only answers, that the people are able enough to pay these expenses without the assistance of the proprietaries. This likewise seems to be starting a new question, and one that is beside the present purpose; for though it were true that the people are able to pay, it does not follow that they should therefore pay unjustly, nor is it likely that they will be pleased and satisfied with so doing, for such a reason. The proprietaries are likewise able to pay, they have revenue enough, but they do not think this a sufficient reason even to pay a part; why then should it be thought sufficient to induce us to pay the whole? the charge contained in this paragraph, "that the application was only an attempt to induce the weakest of the people to imagine the house had an uncommon regard to their interests, and were therefore the most proper persons to be continued their representatives at the ensuing election;" your committee think an absolute mistake, and unsupported by the least degree of probability. For there had not been for some years, nor was there expected to be, nor has there since been, any contest at elections between the proprietary and popular interests; nor if there had, would it have been necessary to take such measures, the proprietaries having, of late years, no formidable share of the people's love and esteem. Nor was the supposed address in fact made to the people; for the representation has never yet been published; nor were the votes containing those resolutions published till after the election was over. Nor is the situation of an assembly-man here so advantageous, as to make it worth his while to use artifice for procuring a re-election; for when the smallness of the allowance, the expense of living, the time he is absent from his own affairs, and other inconveniences are considered, none will suppose he can be a gainer by serving the public in that station.

7. But whether assembly-men may or may not expect any gainful advantages from that station, we find our chief governors informing us in pretty plain terms, in the seventh paragraph, that they themselves are not without such expectations from theirs; they tell us, "their consent is necessary to our laws, and that it will tend the better to facilitate the matters which must be transacted with them, for the representatives to show a regard to their interest." That is, as we understand it, though the proprietaries have a deputy here supported by the province, who is or ought to be fully impowered to pass all laws necessary for the service of the country, yet, before we can obtain such laws, we must facilitate their passage, by paying money for the proprietaries, which they ought to pay, or in some other shape make it their particular interest to pass them. We hope, however, that if this practice has ever been begun, it will never be *continued* in this province; and that, since, as this very paragraph allows, we have an undoubted right to such laws, we shall be always able to obtain them from the goodness of our sovereign, without going to market for them to a subject.

Yet, however easy it may be to understand that part of this paragraph which relates to the proprietaries' interest, your committee are at a loss to conceive why, in the other part of it, the people are to be acquainted, "that the crown has been pleased to give the proprietaries a rank, and that they expect from the representatives a treatment suitable thereto." We cannot find on perusing the representation in question, that it contains any treatment unsuitable to their rank. The resolve of the house was, that to prevent dissatisfaction on all sides, they should be requested, in the most reasonable and most respectful manner, to agree upon a proportion of Indian charges to be paid by them and the province according to justice; and it may be submitted to the judgment of all impartial persons, whether the representation drawn in pursuance of the resolve, was not both reasonable in itself, and respectful in the manner. It was not, as the proprietaries represent it, an address to the public. It is not to this day made public. It was a private application to themselves, transmitted to them through the hands of their governor. Their true interest (which they will always find to consist in just, equitable, and generous measures, and in securing the affections of their people) was consulted in it; and one suitable means proposed to obtain that end. As to rank, the proprietaries may remember, that the crown has likewise been pleased to give the assemblies of this province a rank; a rank which they hold, not by hereditary descent, but as they are the voluntary choice of a free people, unbribed. and even unsoli-

cited. But they are sensible that true respect is not necessarily connected with rank, and that it is only from a course of action suitable to that rank they can hope to obtain it.

8. Your committee are quite surprised at the concern the proprietaries are pleased to express in their eighth paragraph, on their being, as they say, laid under a necessity of acquainting the public with the state of the revenue of the province; as if the state of that revenue had ever been a secret; when it is well known, and the proprietaries themselves know, that the public accounts are yearly settled, stated, printed, and published by the assembly, and have been so for these thirty years past. Whatever private reasons the proprietaries may have to make a secret of their revenue, we know of none to make one of the revenue of the province, nor has it ever been attempted. Their following observations, concerning the nature of our taxes, and the distinction between general and particular taxes, seem to your committee not so just and accurate as might be expected; for we cannot conceive that the willingness of people to subject themselves to the payment of interest or excise, by taking money on loan, or consuming spirituous liquors, makes either the one or the other less a tax. The manner of laying a tax, the easy method of levying it, and the benefits arising from the disposition of it, may all tend to induce people to pay it willingly; yet it is still a tax. And indeed all taxes ought, upon the whole, to produce greater good to a people, than the money kept in their pockets could do; in such case, taxes are no burdens; but otherwise they are. Taxes, seemingly particular, are also more general than they are often supposed to be: the labouring man must live: excise the materials of his subsistence, and he generally finds means to get more for his labour.

After estimating our whole present revenue, as if it had been the same for twenty years past, and would certainly continue, though the proprietaries know it depends on temporary acts near expiring, the renewal of which is at best dubious, they conclude that four hundred pounds a year for Indian expenses is a small sum, and that we are under no necessity of being frugal, on this account, of the public money. This four hundred a year is the sum that they find has been paid on an average for twenty years past, and they take no notice of its being a growing charge, and that for the four last years before the representation, it amounted to near twelve hundred a year, which we conceive disinterested persons will think a very large sum; and although the same excise might have been raised, if not half that money had been expended, it does not seem to us to follow, that the proprietaries ought not to have paid their just proportion of it. If the sum be small, their proportion of it must have been smaller; and the money so saved might have been applied to some other use, beneficial to the public; or have remained ready in the treasury for any emergency.

9. On the ninth paragraph your committee will only observe, that the people of Pennsylvania do likewise pay duties and excise for the support of his majesty's government; and other taxes, which, considering their ability, are perhaps proportionably equal to those paid by the proprietary family, or any other subjects in England. We pay indeed as much as an infant colony can well bear, and we hope and believe the justice of a British parliament will never burden us with more. The proprietaries' exemption was not published till now at their own instance. It was made use of as a private motive to themselves only, in the representation.

10. On inquiry, we have reason to believe that the interpreter's bills of charge against the province, have always been allowed and paid; and where his accounts have contained blank articles for his services, he has been asked what would satisfy him, and the same has been allowed. We suppose the instances alluded to, wherein the assembly did not fully satisfy him, must have been such as the proprietaries were concerned in by the purchase of lands, and a part might accordingly be left for them to pay. We believe our assemblies always have been, and we hope always will be, ready to acknowledge gratefully any services rendered to the public by the proprietaries; and not merely to acknowledge them, but to make adequate returns.

11. Whether the monopoly of lands, in favour of the proprietary, was established by the royal grant, or by acts of assembly, or by both, your committee do not think it material at this time to dispute, since the reasoning in the representation remains the same, viz. that those in whose favour such monopoly was erected, ought at least to bear a part of the expense necessary to secure them the full benefit of it.

12. In the twelfth paragraph, three things appear somewhat extraordinary to your committee. 1. That the proprietaries should deny that treaties for land are made at less expense on account of provincial presents accompanying them, which we think any disinterested judge would at least allow to be probable. 2. That they should say the last purchase was made on no other account, but purely to save the province the expense of a present; as if they had no occasion to purchase more land of the Indians, or found no advantage in it. 3. That to prove such purchases were not the cheaper on account of provincial presents accompanying them, they should give an instance in which, they themselves say, the purchase was the dearer for want of such presents. If purchases are dearer to the proprietaries when no provincial presents accompany them, does not this clearly confirm the assertion of the assembly, that they are the cheaper when there are such presents? and does it not prove what the proprietaries deny?

13. It appears by their thirteenth paragraph, that the proprietaries think the part they voluntarily submit to bear, and expect always to bear, of public expenses, is greater than their proportion, equitably laid, would amount to. If this be so, and they are, as they say, "far from desiring to avoid contributing to any public expense, which it is reasonable they should bear a part of, although their estate is not by law liable to be taxed;" your committee are at a loss to conceive, why they should refuse, "to enter into any agreement for the payment of any particular proportion of Indian or other public expenses," when such agreement might save them money, and is proposed to prevent dissatisfactions, and to preserve union and harmony between them and the people; unless it be to show their utter contempt of such union and harmony, and how much they are above valuing the people's regard.

The charge on former assemblies, that they neglected the defence of the proprietaries' city;

your committee cannot but think unkind, when it is known to the world, that they gave many thousand pounds during the war to the king's use, besides paying near three thousand pounds at one time, to make good the damages done to the masters of servants, by the irregular and oppressive proceedings of the proprietaries' lieutenant; and that their not providing cannon to defend the city, was not from neglect, but other considerations set forth at large in the printed proceedings of those times, needless now to be repeated. At the same time it may be remembered, that though the defence of the proprietaries' city, as they are pleased to term it, by batteries of cannon, was more their interest (we will not say duty) than any other person's whatsoever, and they now represent it as a thing so necessary, yet they themselves really neglected, and even discouraged it; while some private gentlemen gave sums nearly equal to that they mention, and many contributed vastly more, considering their circumstances, by which means those batteries were not only completed in season, but the defence of both town and country in that way provided for; whereas this boasted assistance of four hundred pounds worth of cannon, was sent, like Venetian succours, after the wars were over. Yet we doubt not, but the proprietary who sent them has long since had the thanks of those who received them, though we cannot learn that they ever were favoured with any from him, for what they did and expended in defence of his share of the province property.

14. The fourteenth paragraph of the proprietaries' answer seems calculated merely for the same design with which they charge the representation, viz. to amuse the weaker part of the people. If they are really disposed to favour the drinkers of spirituous liquors, they may do it without a law, by instructing their lieutenants to abate half the license fees, which would enable the retailers to sell proportionably cheaper; or to refuse licenses to more than half the present number of public houses, which might prevent the ruin of many families, and the great increase of idleness, drunkenness, and other immoralities among us.

15. In return to the good resolutions expressed by the proprietaries in their fifteenth section, your committee hope that future, as well as past assemblies, will likewise endeavour to make the public good the rule of their actions, and upon all occasions consult the true interest and honour of the proprietary family, whatever may be the sentiments or conduct of any of its particular branches. To this end, we think the honest and free remarks contained in this report, may be more conducive than a thousand flattering addresses. And we hope, that when the proprietaries shall think fit to reconsider this matter, they will be persuaded, that agreeing to an equitable proportion of expense will be a good means of taking away one handle of dissension from "men of warm uneasy spirits, if such should ever unhappily procure themselves to be elected."

16. Yet if the proprietaries are really desirous of preserving an union and harmony between themselves and this people, we cannot but be surprised at their last paragraph, whereby they endeavour to cut off the assembly's access to them, in cases where the answers received from their deputies, may not be thought agreeable to the public good. No king of England, as we can remember, has ever taken on himself such state, as to refuse personal applications from the meanest of his subjects, where the redress of a grievance could not be obtained of his officers. Even sultans, sophys, and other eastern absolute monarchs, will, it is said, sometimes sit whole days to hear the complaints and petitions of their very slaves; and are the proprietaries of Pennsylvania become too great to be addressed by the representatives of the freemen of their province? if they must not be reasoned with, because they have given instructions, nor their deputy because he has received them; our meetings and deliberations are henceforth useless; we have only to know their will, and to obey.

To conclude, if this province must be at more than two thousand pounds a year expense, to support a proprietary's deputy, who shall not be at liberty to use his own judgment in passing laws [as is intimated to us in the fourteenth section of the answer we have been considering] but the assent must be obtained from chief governors, at three thousand miles distance, often ignorant or misinformed in our affairs, and who will not be applied to or reasoned with when they have given instructions, we cannot but esteem those colonies that are under the immediate care of the crown in a much more eligible situation: and our sincere regard for the memory of our first proprietary, must make us apprehend for his children, that if they follow the advice of Rehoboam's counsellors, they will, like him, absolutely lose—*at least the affections of their people.* A loss, which however they affect to despise, will be found of more consequence to them than they seem at present to be aware of.

All which is humbly submitted to the correction of the house, by, &c.

September 11, 1753.

A message from governor Morris to the assembly, August 12, 1755.

GENTLEMEN,—When I amended and sent down to you the bill for raising fifty thousand pounds for the king's use, I expected you would have returned it to me with the amendments, and informed me which of them you agreed to, this being the common and ordinary method in such cases; but you departed from this, and desired to know whether I was restrained by the proprietaries from taxing their estate, and the reasons for my opinion, as to that measure; and though this application was unparliamentary, and I believe unprecedented, yet upon this occasion I indulged you therein, and gave my reasons in the mildest terms, on which, however, you have been pleased to treat both the proprietaries and myself in a very unbecoming manner.

As you have returned me the bills without the amendments, and in your message that accompanied it, offer no reasons against any of them but such as relate to taxing the proprietary estate, I conclude you have agreed to the others; I shall therefore consider the several parts of your message, and make such observations upon, and answer to it, as I think it merits.

Having told you that I had no power by my commission to hurt or incumber the proprietary estate, you take occasion in your answer to play with the words *hurt* and *incumber*, and having

viewed them in different lights, tell me, "that your bill is intended to free the proprietary estate from hurt and incumbrance, by removing the French, and that you are as much bound not to hurt or incumber the estates of your constituents, as I am with respect to the proprietary estate;" and having shown, as you think, that the proviso in my commission does not prohibit me in the present case; you then proceed to reason upon the clause itself, and after producing a very good opinion of a former council, judge, and secretary, as to a particular saving in the late proprietary commission, you very roundly pronounce that proviso to be a nullity, and not at all binding on me.

You must give me leave to differ from you in opinion, as to the force of the words in that clause, which, notwithstanding what you have said, have still the same plain and determinate meaning they had before; every tax, in my mind, being an incumbrance upon an estate, from which it cannot be cleared but by the payment of a certain sum of money; and I being expressly restrained by my commission from consenting to any act that may incumber the proprietary estate, every unprejudiced person will see clearly, that my powers do not extend to the present case, and that if I acceded to your opinion, I should be guilty of a manifest breach of trust.

As to the validity of prohibitory clauses in the proprietary commissions, I am not fortunate enough to comprehend the force of your reasonings upon this head, which are drawn from the fourth section of the royal charter; for though by that charter power is given to the proprietaries, their deputies, and lieutenants, to make laws, yet it does not alter the relation which by law subsists between a principal and his deputy, the intention of the charter in that particular, being no other than to impower Mr. PENN, and his heirs, to administer the government by his and their lieutenant or deputy, which being a judicial office, he could not otherwise have done; and so far is the charter, by its general tenor, from making the deputy equal to, or independent of, the principal, that it makes the proprietaries alone civilly answerable for what is done in the province, whether by themselves or their lieutenants, which would be unjust if the lieutenant by the charter was equal in power, independent of, and uncontrolable by, the person that appoints, and is answerable for his behaviour. Though I allow the opinion produced to be good, as to the point then under consideration, yet it is not applicable to all cases, which your arguments, without any foundation, suppose; and in the present one there is a wide difference, obvious to every one who considers them both with the least degree of attention; because that saving was even reserving a power to the proprietary in his own person, to repeal a law which he by his lieutenant had consented to; whereas, in the present case, the restriction amounts to nothing more than a reasonable prohibition upon their governors, as such, from passing laws to injure their estates.

I cannot help observing, that you formerly used these same arguments against the validity of royal instructions, and using them now to destroy the force of proprietary prohibitions, you would, it should seem, be willing that the lieutenant-governor should be independent of every body but yourselves.

You say, that the same proviso restrains me from letting or selling the proprietary lands; and yet I propose to give away six or seven hundred thousand acres upon the present occasion; and seem vastly surprised, that I should think myself restrained from incumbering the proprietary lands by act of assembly, and yet at liberty to give them away; for if, say you, the grant of lands, contrary to such prohibition, would be valid, why not the passing the bill for a tax? And this you call a question you cannot solve. It is something very extraordinary, that the representative body of Pennsylvania should know so little of the affairs of the province, as never to have been informed, that the governor grants the proprietary lands under a certain power of attorney, regularly proved and recorded, called a commission of property. That this power was formerly vested in private persons; but for some years past, has been given to the governors; and being the foundation of property, cannot be unknown to any the least acquainted with the circumstances of the province. And to ask a question or two in my turn, how could you think that the lands in the province were granted under the powers of a commission that expressly prohibits the granting of any? or that the people would be so weak as to give money for lands, and take titles under such a defective power? as to the proposal itself, it was made with a good intention; and as I am accountable to the proprietaries for my conduct under that commission of property, you may be assured I did not make it without proper power to carry it into execution; and had you raised money for an expedition to the westward, and for encouraging settlers, I should then have made an offer of the lands by proclamation, letting the adventurers know, that they were to have the choice of the lands in preference to all others, with every thing else that could reduce the offer to a certainty; which there was no necessity of doing in a message to you, barely mentioning the thing, and recommending to you to grant an aid to those that should become settlers after the French were removed.

But whatever comes from the proprietaries, however just, however favourable, must be wrong, and accordingly you are determined to represent in that light a proposal generous in itself, and intended to promote the public service and safety; which may serve to show the temper of mind you are in, but can answer no good purpose. You say, lands equally good may be had in Virginia for two shillings sterling quit-rent, and none to be paid in fifteen years; it may be so, but how does it appear that they are equally good? It is plain they are not equally convenient, because of a greater distance from a market. The quit-rent in Virginia, I suppose, was the same formerly that it is now, and yet very great numbers have chosen to purchase lands in this province of the proprietaries, at the rate of fifteen pounds ten shillings per cent, and of private men at a much higher price, and in both cases under the quit-rent of four shillings and two pence sterling, when they might have had them in Virginia for much less; and the proposal ought not to be considered by comparing it with other provinces, but with the rate that lands have, for a number of years past, been sold at in this province; some of them lately in the new purchase, within a few miles of the Alleghany mountains, and others very remote, without any road of communication with this city, which is not the case as to the lands proposed to be given, there being a very good wagon road thither; and, notwithstanding what you have said upon this

head, I am convinced, that if you had enabled me, in conjunction with the neighbouring governments, to have sent a body of troops into that country, an offer of lands, upon the terms abovementioned, would have had very good effects, and would have induced many to have gone and become settlers there, that would not otherwise thought of doing either, and by that means have formed a barrier for the protection and security of the province; and therefore I cannot but be astonished, that you should have taken so much pains to depreciate it.

And now having effectually removed in your judgment my greatest objection to passing your bill, you proceed to consider my reasons in their order. And to the first, that governors, from the nature of their offices, are exempt from the payment of taxes.——You take a very nice distinction between the proprietary as owner of land, and the proprietary as chief governor, and say, "you do not tax him as governor, but as a land-holder, and fellow-subject;" though this is a distinction that has no existence in law or reason, yet I shall for the present admit it, and consider it accordingly. Have the proprietaries a right to vote in the election of representatives as land-holders? surely not, being hereditary governors of the province, and having a voice in the legislature by their own particular representative, the governor. How then came you by a right to tax them as fellow-subjects and land-holders, seeing they had no voice in choosing you, nor were entitled to any, though owners of land in every county? From the very principles therefore of the English constitution, you have no right to tax them as freeholders or fellow-subjects, as you call them; if, therefore, you tax them at all, it must be as proprietaries, and chief governors, which is the only capacity by which they are connected with, or related to, the inhabitants of this province; and under them in that capacity, you derive the power of acting as an assembly. You cannot, therefore, without inverting the order of things, have a power over those from whom you and every one else in the province derive all the power they have. They hold the government and soil of this province under the same grant, and the title to both is centered in their persons, and cannot be separated or divided without destroying their authority. It may be very true, as you say, "that the proprietaries do not govern you;" but that is not owing to any want of legal authority in them, but from another cause that I need not mention here.

The support, as you call it, that is paid by the province to a lieutenant-governor, is no other than the fees of office, and as such are due to any one that administers the government, and are not, what you would insinuate, given to the lieutenant for doing the duty of the principal; the chief of them are public-house licenses, which were originally granted by charter, not by any concession of the people (though you from time to time have taken it for granted to be so) and in favour to them, as former governors took much larger sums for this service, moderate fees have been consented to be fixed by law, as considerations for the business done, not as sufficient for the support of government; all the fees and perquisites whereof do not amount, *communibus annis*, to more than a thousand pounds.

As to the land-tax acts of parliament you refer to, they may be as you say with respect to the crown's fee-farm rents. But I do not conceive they amount to a proof that the king pays taxes, all taxes whatever being paid to him; and there seems to me an inconsistency in supposing he can both pay and receive. I take the clause you mention to have no other meaning than to appropriate part of the revenues of the crown to one public use, which were before appropriated to another; for I must observe to you, that the king can have no private estate, but from the dignity of his office holds his lands in right of the crown. And another reason why a poundage is collected upon the crown's fee-farm rents, may be, that the land-tax should not fall heavier upon the other lands in the same hundreds or districts, as the quotas of each were long ago settled as they now stand in the king's books, and cannot, without confusion, be altered upon the crown's acquiring lands in any of them.

And upon this you break out into a lofty exclamation, that "this is not the first instance by many in which proprietaries and governors of petty colonies have assumed to themselves greater powers, privileges, immunities, and prerogatives, than were ever claimed by their royal master on the imperial throne of all his extensive dominions." I must acknowlege, gentlemen, that these are sounding words; but what instances among the many can you give, of that assuming behaviour in your present proprietaries? have they ever claimed any rights or prerogatives not granted to them by the royal charter, or reserved by that of their father, under which you sit? can you lay to their charge, during the course of a long administration over you, one act of injustice or severity? have they even exercised all those powers which by the royal charter they might legally do, and to which that charter requires the people to be obedient? on the contrary, have they not given up to the people many things they had a right to insist on, and indulged them in every thing that they judged for their benefit? how just is it therefore, gentlemen, to accuse them of assuming powers and prerogatives greater than their royal master? would you turn your eyes towards your own conduct, and apply some of these significant words to yourselves, you would find them much more applicable than they are to the proprietaries. The charter under which you act, gives you the powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the king's plantations in America. This, gentlemen, is the foundation of your powers, which, by the royal charter, were to be consonant to the laws and constitution of England. But instead of confining yourselves to that which your wise ancestors thought fully sufficient to answer the ends of good government, and secure the liberties of the people, you have taken upon you great and mighty powers, dispensed with positive laws by the strength of your own orders, claim a right to dispose of all public money, and of keeping your proceedings a secret from the crown, with many others unknown to an English constitution, and never heard of in the other plantations in America. Who therefore can be so justly accused as yourselves of assuming unwarrantable powers, greater than ever were claimed by a British house of parliament, or, to use your own words, "by your royal master on the imperial throne of all his extensive dominions," who pretends to no powers but what the constitution gives him, and disclaims a right of dispensing with laws.

To these encroachments on the constitution

you give the sacred name of privilege, and under the mask of zeal for the public, conceal your own schemes, pretending they are all for the benefit of the people, when they can answer no purpose but to increase your own power, and endanger the just rights that the people enjoy under the royal and proprietary charters, by making it necessary for his majesty and a British parliament to interpose their authority to save the province. The people have no way so effectually to secure themselves in the enjoyment of their liberty, as strictly adhering to the constitution established by charter, making that the foundation and standard of their proceedings, and discountenancing every deviation from it.

The second and third reasons given by me, and your answers to them being deduced from the law for raising county rates and levies, I shall consider them together.

I do not see why the proprietary estate in each county is not benefited in common with other estates, and by the same means. The proviso therefore relating to their estates, was not inserted because he had no benefit by the money raised, but was properly a condition, upon which his governor consented to vest the whole power of choosing the tax-officers in the people, and is declarative of the rights of his situation, of which the people in general might be ignorant.

I think, with you, that the proprietary tax would not be more than an hundredth part of the whole, but cannot therefore admit, that if he is taxed, he should be excluded from any voice in the choice of those impowered to tax him, or that the votes of his officers, in their own right, can make the assessors his representatives; nor can I easily conceive, that a negative upon a choice is half the choice, or indeed any part of it; but as what you say upon this head has very little argumentative force, I shall not dwell upon it, but say something as to the law itself.

From the tenor of the act it appears to me to be intended, not only for laying and raising taxes to defray the necessary charges in every county, but to settle the mode of raising money upon all occasions; it directs the manner of choosing commissioners, assessors, collectors, and treasurers, gives them particular powers, and regulates the conduct of those intrusted with the laying and receiving taxes. It is a positive and perpetual law, and by a special proviso expressly declares the proprietary estate not liable to taxes. You yourselves apply it to a provincial purpose by the bill under consideration, and the apparent reason why it was never applied to that purpose before is, that no provincial tax has ever been laid since the enacting of that law.

You are certainly impowered, by some temporary laws to dispose of particular monies raised by those laws, when they come into the public offices, and I do not know that this power has been disputed; the legislature that gave those laws a being, had a right to pass them in that shape, and a future legislature may do the same, if they think fit; but I do not conceive that you have from those laws a right to dispose of all money that shall be raised, that being no part of the charter, but must depend upon the legislature that raises it, who may reserve the disposition to themselves, give it to you, or any body else they think fit.

And here I cannot help taking notice of an expression in your message, that you have allowed me a share in the disposition of the fifty thousand pounds. Is it from you, gentlemen, that I derive the right of governing this province, or from your allowance that I have a voice in the legislature? are you the sovereign disposers of power? have you a right to give and take away at pleasure? if not, whence that lofty claim of allowing your governor a share in the disposition of public money? is not the whole property of the people subject to the power of the legislature; and have I not a voice in that legislature, not derived from, or dependent upon, you; and how came you therefore by a right to allow me a share in the disposition of money, which cannot be raised without my consent? such language may possibly be agreeable to your notions of your own superlative powers, but is not justified by the constitution established by charter, or any rights properly belonging to an assembly: and your claiming such a power, shows the extensiveness of your plan, which is no less in that respect, than to render yourselves independent, and assume a superiority over your proprietaries and governors; a plan you would not fail to carry into execution, were your power equal to your inclinations.

The proprietaries do not shrink, as you call it, at the payment of a small sum of money, nor is that the motive for insisting on their right, they having by me offered much more than their proportion of this tax can possibly amount to; but to preserve the rights of their station, which if they give up, whenever they are demanded, as claims will never be wanting, they will very soon be stripped of every thing they have a right to enjoy, both power and property.

Your answer to my fourth reason admits, that taxing the estates of proprietaries is contrary to the usage and practice in this and other governments, by saying, that custom and usage, against reason and justice, ought to have but little weight. But I do not admit that reason and justice are on your side of the question; on the contrary, I think I have shown that they are with me, and look upon the usage and custom as a strong evidence, that the legislatures of this and other proprietary governments were of my opinion; and I am very much concerned, gentlemen, that you shall choose this time of imminent danger, when your country is invaded, to introduce a new and extraordinary claim, to the prejudice of persons that are absent; when you know, that however right you may think it, I have it not in my power to consent to it, consistent with duty and honour.

As to myself, I think it necessary to say, that for the despatch of the public business at this critical conjuncture, when every honest heart should be concerned for the public service, I studiously avoided every thing that could renew the disputes that subsisted between us, and earnestly recommended the same temper of mind to you; and cannot therefore but be exceedingly surprised in return to be thus injuriously treated, and represented as the hateful instrument, of reducing a free people to the abject state of vassalage. What grounds have you, gentlemen, for this heavy charge? what laws of imposition, abhorrent to common justice and common reason, have I attempted to force down your throats? have I proposed any thing to you, during the course of my short administration, but to grant supplies to the crown adequate to the exigency of the times; to assist the king's forces sent for our protection; and to put the province into a posture of defence

by establishing a militia, which is putting the sword into the hands of the people for their own security? and where can it be trusted with more safety than to themselves? are these impositions, or are they abhorrent to common justice and reason? I have, it is true, refused to give my assent to some bills proposed by you, because they were contrary to the king's instructions; and amended others, to make them agreeable to the charter, and consistent with the safety of the people, by lodging the disposition of the public money in the hands of the legislature; and for this, which is no more than a due obedience to the lawful commands of the crown, and the free exercise of my reason and judgment in matters of legislation, am I branded with infamy and reproach, and set up as the object of a people's resentment.

I am not, gentlemen, conscious to myself of having done, or intended to do, any the least injury to the people committed to my charge; and the man that has been oppressed or injured by me, let him stand forth and complain. Who is it in your province that does not enjoy the freedom of his own religious worship? whose liberty have I taken away? or whose property have I invaded? surely if I have taken advantage of the people's distress, and of your regard for your country, to force down your throats laws of imposition, abhorrent to justice and reason; if I have done or attempted any thing to deprive the people of their liberties, and reduce them to the abject state of vassalage, you will be able to point out some instances of these things; and I call upon you to do it, if you can, and make good your charge. It is not to the people I am hateful, gentlemen, but to yourselves; and that for no other reason, but doing the duty of my station, exercising my own judgment, as a branch of the legislature, with freedom and independency, and keeping you, as far as it was in my power, to the duty of yours.

Had you really any tenderness for your bleeding country, would you have acted the part you have done? would you have looked tamely on, and see the French seat themselves within your borders? would you have suffered them to increase their numbers, and fortify themselves in a place from whence, in few days, they may march an army among the inhabitants? would you have been deaf to all the affectionate warnings and calls of his majesty, the faithful guardian of his people's safety? and would you have refused the proper, necessary, and timely assistance to an army, sent to protect these colonies? or would you now, when that army is defeated, waste your time in disputing about new and extraordinary claims of your own raising, when every head and hand should be employed for the public safety?

However, gentlemen, to conclude, let me entreat you to lay aside all heat and animosity, to consider the naked and defenceless state of the inhabitants, with a temper of mind becoming the important occasion; to look upon the French, and their Indians, as your only enemies, and the persons that intend to enslave you; and be assured, that your proprietaries, or governor, have no designs to the prejudice of the people of Pennsylvania, but will continue to protect them in the enjoyment of all their just rights and privileges.

The assembly's answer to the foregoing message, August 19, 1755.

MAY IT PLEASE THE GOVERNOR,—How disagreeable soever the task may be, to wade through all the misrepresentations in the governor's long message of the thirteenth instant, a regard to truth, and to truths of importance to the welfare of our country, will oblige us to submit to it.

The governor is pleased to tell us, that "when he sent down our bill for raising fifty thousand pounds, with the amendments, he expected we should have returned it with the amendments, and informed him which of them we agreed to, this being the common and ordinary method in such cases." The governor allows in this message, that we have by charter, "the powers and privileges of an assembly, according to the rights of the freeborn subjects of England, and as is usual in any of the king's plantations in America." Now, we take it to be one of those privileges and powers of an assembly, to have their money-bills, granting supplies to the crown, accepted as they are tendered, if at all accepted, and that without any proposal of amendments. We think this is a privilege claimed and used by the house of commons, and as far as we know by all the assemblies in America; so that it is far from being the common and ordinary method to receive and debate on amendments proposed by the governor to such bills. It is therefore without foundation, that the governor supposes we agreed to all the other amendments, merely because we offered no reasons against any of them, but that which related to taxing the proprietary estate. For we even made that step of deviation from the common and ordinary method, entirely in consideration that the occasion for the supply was uncommon and extraordinary, hoping thereby to come more speedily to a happy conclusion in the business of the session, and without the least intention that it should ever be drawn into precedent.

The governor still insists, that taxing the proprietary estate, though it be to free it from French encroachments, will be an incumbrance on that estate. Be it so then, since the governor will have it so, for our differences are less about words than things: does this however prove the validity of the prohibitory clause in his commission? or that it is equitable and just the proprietary estate alone should be exempt from a tax, which all the estates in Britain and her colonies now bear, or must bear, to free that very estate from encroachments and incumbrance?

The governor is "not fortunate enough, he is pleased to say, to comprehend the force of our reasonings on this head that are drawn from the fourth section of the royal charter;" which, though it gives power to the "proprietaries and their deputies and lieutenants to make laws, does not alter the relation between a principal and his deputy, or make the deputy equal to, or independent of, the principal, &c." We will therefore, for the governor's satisfaction, endeavour to express our sentiments yet plainer, if possible, and enforce them farther. The royal charter grants "full, free, and absolute power (not only to the proprietary and his heirs) but to his and their deputies and lieutenants, to enact any laws whatsoever, for raising money for the safety of the country, according to their best discretion, with the assent of the freemen, &c." But the governor objects, notwithstanding this full and free power, granted by the royal charter to me as the proprietaries' deputy, I cannot use my best discretion in this case, nor enact the proposed law, because there is in my commission a prohibitory

clause or saving which restrains me; and if I should pass it, such prohibition notwithstanding, the law would not be valid. To this we answered, that no prohibition of the proprietaries can lessen or take away from the lieutenant-governor any power he is vested with by the royal charter; and, in support of this, as an argument, at least, to the governor, produced to him an opinion of the proprietary and governor's former council, on the case of a proviso or saving in the lieutenant's commission, that restrained, in favour of the proprietary, the power of making laws which is granted to the lieutenant in the royal charter. This opinion (which the governor allows to be a good one) declares that saving to be void in itself, and that any laws passed by the lieutenant shall be valid, the saving notwithstanding. But the governor would distinguish it away, by alleging, "that though the opinion was good in that case, it is not applicable to all cases." If it is applicable to the present case, it is all that is necessary for our purpose, which was to show, that a proviso in his commission, restricting the powers granted him by charter, was void in itself; and that if he passed a law contrary to the proviso, the law would be valid. The "relation between the principal and his deputy" still remains entire; the deputy is dependant on the principal, and may be removed by him at pleasure. But as the principal cannot give powers to the deputy which he has not himself, so neither can he lessen the powers given to the deputy by the charter. If the proprietary can, by prohibitory clauses in his commission, restrain the deputy from passing any one law, which otherwise he had power by the charter to pass, he may by the same rule restrain him from passing every law, and so the deputy would be no deputy. That the charter makes the proprietary "civilly answerable for what is done in the province by their lieutenants," we conceive to be a mistake. The proprietary is by the charter, made answerable for any misdemeanour that he himself shall commit, or by any wilful default or neglect permit, against the laws of trade and navigation. But if the deputy commits a misdemeanour, which the proprietary does not permit, through his own wilful default or neglect, we presume he is not answerable for such misdemeanour by the charter; and less, in reason, now, than when the charter was given; as by an act of parliament of later date, every deputy appointed by the proprietary, must before he can act as such, receive the royal approbation. The very nature and reason of the things, moreover, seem to us to show, that a deputy to do a thing, should have all the powers of the principal necessary for doing that thing: and every lieutenant or deputy governor, is, by the nature of his office, and the reason of his appointment, to supply or hold the place of a governor. But the royal charter being so express and plain in the point, leaves us under no necessity of investigating this truth by reason. Should our constituents, when they choose us to represent them in assembly, not only instruct us, but even take bonds of us, that we should assent to no law for the better and more effectual recovery of the proprietary quit-rents, if such a law were required of us, or thought necessary by the governor; would he think such prohibitions or bonds valid? would he not say they were void in themselves, as forbidding what he thinks a just and reasonable thing, depriving us of the right of using our best discretion, and restraining the powers granted to us by charter. The case we conceive to be the same with respect to the proprietaries' lieutenant (who is their representative) if he is so restrained as the governor thinks himself to be. "The government, and the exercise of the government, are inseparable," says chief justice Pollexfen, a famous lawyer, "and wherever the government is granted, the exercise of that government is meant and included. If the king grant to any one the government of Jamaica, or the like," continues he, "sure no one will say, that that is not a grant of the exercise of the government there!" and we suppose this is as good law, with regard to the grant of the government of Pennsylvania.

The governor is pleased to say, that he cannot help observing, that we formerly used the same arguments against the validity of royal instructions. We have all due respect and deference for royal instructions; the king has not any where a more dutiful and loyal people; but what does the governor intend by the validity of instructions? does he mean that they are laws in the colonies; and if the royal instructions were such, does it follow that proprietary instructions have the same validity? we apprehend there may be some difference, but at present it is not necessary to discuss it.

For our doubting in the least the governor's power to make the offered grants of land (free of purchase money and quit-rent for fifteen years) in the behalf of the proprietary, he is pleased to treat us with great contempt on account of our ignorance, observing, that "it is something very extraordinary, that the representative body of Pennsylvania should know so little of the affairs of the province, as never to have been informed, that the governor grants the proprietary lands under a certain power of attorney, regularly proved and recorded, called a commission of property; that this power was formerly vested in private persons, but for some years past has been given to the governors; and being the foundation of property, cannot be unknown to any the least acquainted with the circumstances of the province." And now, continues the governor, to ask a question or two in my turn, how could you think that the lands in the province were granted under the powers of a commission [meaning his commission as lieutenant-governor] which expressly prohibits the granting of any? really we should be very ignorant indeed if we thought so; but it happens, may it please the governor, that we are perfectly well acquainted with all these matters, and have even now lying before us an authentic copy of that certain power of attorney, called a commission of property, which we suppose most, who have read the governor's message, are persuaded gives him full powers to make the grants of land, which in his message of the twenty-eighth past, he proposed "to make to such persons as shall now engage to go upon an expedition to remove the French from their encroachments on the river Ohio, without any purchase money, and free of quit-rent for fifteen years." Our copy of this commission is taken from the records, and certified to be a true one, under the hand and office seal of the master of the rolls. We have examined it thoroughly to find the powers by which those grants were to be made, and unfortunately (we are sorry we are obliged to say it to the governor) there is no such thing; not even a syllable of the

kind; but on the contrary, after a power given to the governor to grant lands claimed by virtue of former purchases, there is this clause, "and also, by warrants to be issued as aforesaid, to grant to any person or persons who shall apply for the same, and to their heirs and assigns for ever, any vacant lands within the said province and counties, or any of them, upon, by, and under the same terms, methods, rents, and reservations, as have of late been used and practised in the said land office, but for no less price, condition, rent, or reservation in any wise." That is, for fifteen pounds ten shillings, per hundred acres, purchase money, and four shillings and two pence sterling quit-rent. And now will the governor give us leave to ask a question or two in our turn? "how could he think that lands might be granted away, without any purchase money, and free of quit-rent for fifteen years, under the powers of a commission which expressly forbids his granting any" under less price, condition, rent, or reservation whatsoever, than has of late been used and practised in the land office? how could he think of referring us to such a commission for his power to make those grants, when he knew it was never there? how could he slight his reputation so much, as to hazard such an imposition on the assembly and whole province! one so easily detected! we make no further remarks on this, lest we should again incur the censure of treating our governor in an "unbecoming manner."

"The proposal, however, the governor is pleased to say, was made with a good intention; and had we raised money for an expedition to the westward, and for encouraging settlers, he should then have made an offer of the lands by proclamation, letting the adventurers know, that they were to have the choice of the lands, in preference to all others, with every thing else that could reduce the offer to a certainty, which there was no necessity of doing in a message to us, barely mentioning the thing, and recommending to us to grant an aid to those that should become settlers." It is remarkable how slowly and gradually this generous offer is squeezed out. We never heard a word of it during all the time of general Braddock's expedition, for which recruits were raised both in this and the neighbouring colonies, though the governor brought over with him, and had in his pocket all the while, that "certain power of attorney, called a commission of property," to which we are referred for his powers of making the offer. But as soon as the house had voted to raise fifty thousand pounds by a tax on all the estates in the province, real and personal, down comes a message, containing a proposal to grant lands to the soldiers who should engage in the expedition; a proposal made with a good intention, as the governor says; that is, with an intention to get the proprietary estate exempted from the tax, by seeming to offer an equivalent in another manner; but worded in the most cautious terms, as became an offer made without authority; and so as indeed to offer nothing that could affect the proprietary; for the quit-rent to be reserved, not being ascertained, but left in the proprietary's breast, he might, when the patents were to issue, demand a quit-rent greater than the worth of the land. This being observed, and talked of, we had another message, intimating that the quit-rent to be reserved should be only the common quit-rent of four shillings and two pence sterling, per hundred acres. But still the land was no otherwise described than as west of the Alleghany mountains; leaving the proprietary at liberty, after the conquest should be made, to pick out, according to the modern practice, all the best lands for himself and his friends, and offer the adventurers such as they would be sure not to accept of under that rent. And this being pointed out, we are now told, "that a future proclamation is to give them the choice of the best lands; but it was not necessary to mention this to us in a message recommending to us the granting an aid to those settlers." If we were to grant aids to the settlers on proprietary lands, was it not proper for us, as guardians of the people, to know the terms on which they were to hazard their lives, and see that those terms were good in themselves, and the offer duly ascertained? we conceive, may it please the governor, that whenever we grant an aid for the encouragement of such settlers, it will be proper to have the terms ascertained by the same law, and not left to the precarious effect of a proclamation thereafter to be made by a governor, in the proprietary's behalf, without any apparent power for so doing. If the offer is well meant, a law to ascertain it cannot hurt the proprietaries; the recovery of the country, and the settlement of the lands, are two distinct things. Let us first join equitably in the tax for the recovery; and whenever the governor shall be willing to pass such a law, we are not averse to giving the proposal of granting lands a full and mature consideration; and affording such equivalent encouragement to settlers, in provisions, &c. as we mentioned in our former message. But if he can pass such a law to grant the proprietary's lands, contrary to the prohibition in his commission, may he not full as well pass the bill for taxing the proprietary's estate?

We cannot leave this point, without a word or two in justification of ourselves, against the heavy charge of depreciating, from a bad temper of mind, this generous offer, that would have had such good effects in promoting the public service and safety. We would not be misunderstood; we look upon it that lands may be made a valuable encouragement, but we do not see any generosity in offering them to the recoverers at double the market price. The encouragement to adventurers is not diminished, but rather increased, by our telling them where they may, for their service in the same expedition, have lands equally good and more convenient, on better terms. For the Virginia vacant lands are many of them nearer to navigable water than the good western lands of this province, and equally well accommodated by the wagon road made by the late army. It is true, the proprietaries' price is fifteen pounds ten shillings per hundred acres, with a quit-rent of four shillings and two pence sterling. Numbers who imprudently made improvements before they obtained a title, were obliged to give that price; and the great assistance our loan office afforded by furnishing money to poor people on low interest, and taking it again in small payments, thereby enabling them to purchase lands, an advantage they could not have elsewhere, might encourage many to stay in the country, and take up lands on those terms. But that is now over: for the act is near expiring, and it seems we are to have no more of the kind; and when that encouragement had its full force, was it ever known that any people

came from Virginia to purchase here, on account of the superior goodness or convenience of our lands? on the contrary, have not many thousands of families gone from hence thither, and within these few years settled fifteen or twenty new counties in that colony? have not thousands likewise left us to settle in Carolina? had not the exorbitant price at which the proprietaries held their lands, and their neglect of Indian purchasing in order to keep up that price, driven these people from among us, this province would at this day have been in a much more flourishing condition. Our number of inhabitants and our trade would, in all probability, have been double; we shou'd have been more able to defend the proprietary's estate, and pay his tax for him, and possibly more willing; but they are gone, and gone for ever, and numbers are going after them! and if the new politics prevail, and our distinguishing privileges are one by one to be taken from us, we may, without the gift of prophecy, venture to foretell, that the province will soon empty itself much faster than it ever filled.

In fine, this offer was in fact a mere illusion intended first to impose on the assembly, and then on the people; it was likewise to figure with at home in the eyes of the ministry. We discovered the deception, and the governor is offended that we did not keep the secret. He is "astonished that we should depreciate an offer which would have had very good effects, and induced many to have gone on the expedition and become settlers, that would not otherwise have thought of doing either." May it please the governor, as bad an opinion as he is pleased to entertain of us, we have some conscience; and would not choose, by our silence, to have any share in the disappointment and other ill consequences which might ensue to those who should have gone on that vague, empty, unwarranted offer, and not otherwise have thought of it. And we, in our turn, may be astonished that the governor should expect it of us.

We are in the next place told by the governor, "that we take a very nice distinction between the proprietary as owner of land, and the proprietary as chief governor, and say, we do not tax him as governor, but as a land-holder and fellow-subject." Our words are, "We do not propose to tax him as governor, &c."—but the governor by carefully omitting the word *propose*, in his quotation, gives himself an opportunity of expatiating on the absurdity and insolence of our inverting the order of things, and assuming a power to tax the proprietaries, "under whom, [he is pleased to say] we derive the power of acting as an assembly." Had the word *propose* been honestly left in its place, there would have been no room for all this declamation; and the demand, "How came you by a right to tax them?" might have well been spared; since, though we as an assembly have no right to tax the proprietary estate, yet the proprietary and assembly together have surely such a right; and as he is present "by his own particular representative the governor, we may have a right to propose such a thing to him, if we think it reasonable. Especially since we do not, as the governor imagines we do, derive our power of acting as an assembly from the proprietary, but from the same royal charter, that impowers him to act as governor.

We had been told in a former message, that the proprietary ought to be exempt from taxes, for he was a governor, and governors were exempt by the nature of their office. We replied, that he did not govern us, but the province supported his lieutenant to do that duty for him. On this the governor now makes the following observation: "It may be very true, as you say, that the proprietaries do not govern you; but that is not owing to any want of a legal authority in them, but from another cause, that I need not mention here." We were reproached in the beginning of this message, as playing with words; and the governor, it seems, has now caught the infection. The reason we gave why the proprietary could not be said to govern us, was a plain one; but the governor insinuates some other cause without explaining it, that there may be room for the reader's imagination to make it any thing or every thing that is bad. We dislike these dark inuendoes, and shall speak our minds openly. It may be thought rude and unpolite, perhaps, but it is at least fair and honest, and may prevent misunderstandings. If, therefore, the present proprietaries do not govern us it is because they never assumed the government in their own persons, but, as we said before, employ a deputy; and if the deputy does not govern us, it is not because we are ungovernable or rebellious, as he would insinuate, nor for want of sufficient power in his hands by the constitution; but because he has not that spirit of government, that skill, and those abilities, that should qualify him for his station.

The governor is pleased to tell us, "that our distinction between the proprietary as owner of land, and the proprietary as chief governor, has no existence in law or reason." We shall endeavour to show him, that it exists in both with regard to the king, and therefore presume it may with regard to the proprietary. The governor tells us likewise, as a matter of law, "that the king can have no private estate, but from the dignity of his office holds his lands in right of the crown." We are not any of us lawyers by profession, and would not venture to dispute the governor's opinion, if we did not imagine we had good authority for it; we find in Viner's abridgment, an allowed book, title descent of lands, these observations, which we hope may be satisfactory to the governor in both points. It is there said, "that the king has two capacities, for he has two bodies, of which the one is a body natural, consisting of natural members, as every other man is; the other is a body politic, and his members thereof are his subjects. He may take in his body natural, lands or tenements, as heir to any of his ancestors; and also in this capacity may purchase to him and his heirs, and his heirs shall retain it, notwithstanding that he is removed from the royal estate. And he may also take or purchase lands or tenements in fee in his body politic, that is to say, to him and to his heirs kings of England, or to him and his successors kings of England; and so his double capacity remains, as it does in other persons who have a double capacity, as bishop or dean," &c. We presume that our proprietaries hold the manors they have laid out to themselves, and the other lands they may have purchased in their province, in their private capacities, as Thomas Penn, or Richard Penn, and not in their capacity of chief governor. The governor is pleased to allow, "that one reason why the king's fee-farm rents are taxed in England, may be, that the land-tax

should not fall heavier upon other lands in the same district." It seems to us a good reason, and to hold as well in our case. For should the proprietaries go on increasing their already enormous estate, sue and recover all their mortgages, add field to field, and make purchase after purchase, till the number of freeholders in the province is reduced to a handful; can it be thought reasonable that every estate as it comes into their hands shall be exempt from taxes, and the burden of supporting the government, and defending the province, thrown all upon the remainder? and yet this must be the case if our distinction has, as the governor says, no existence in law or reason.

The governor denies that the fees and perquisites he enjoys are paid for support of government; they are, he says, "only moderate fees consented to be fixed by law, as considerations for the business done; and the public-house licenses, which are the chief of them, were originally granted by charter." This latter assertion is quite unintelligible to us. We can find no such grant in the royal charter, nor can we conceive how the proprietary can grant a fee to himself by his own charter. The governor is a stranger here, and may be unacquainted with the rise and establishment of what is called the support of government among us. He will therefore permit us to relate it to him, as we have received it from our ancestors, and find traces of it on our records. When the first settlers purchased lands from the proprietary, he demanded, besides the consideration money, that a quit-rent should be reserved and paid to him and his heirs yearly for ever. They objected against this as a disagreeable and unreasonable incumbrance; but were told, that the proprietary being also governor, though he took the purchase money for the land as proprietary, he reserved the quit-rents to be paid for his support as governor; for that government must be supported, and these quit-rents would be the most equal and easy tax, and prevent the necessity of other taxes for that purpose here, as they did in the king's government of Virginia. These reasons induced them to acquiesce in it. But the proprietary's affairs calling him to reside in England, and the quit-rents, then but few, being all wanted to support him there, a lieutenant-governor became necessary, and also a support for that lieutenant, as the proprietary, through the necessity of his affairs, was unable to support him. The public-house licenses and other licenses and fees were pitched upon for this second support, and by perpetual laws were given to the governor for the time being. But governors, a sort of officers not easily satisfied with salary, complaining that these were insufficient to maintain suitably the dignity of their station, occasional presents were added from time to time; and those at length came to be expected as of right, which, if conceded to, and established by the people, would have made a third support. Our situation at this time is, that the present proprietaries claim, and enjoy the quit-rents (which were the first support) as part of their private estate, and draw them to England where they reside, remote from their government, supplying their place here by a lieutenant. The lieutenant takes and enjoys the license money, and other perquisites, which were the second support, and though he has from thirty shillings to three pounds for writing his name only (the secretary being paid six shillings besides for the license and seal) says, they are only moderate fees in consideration for business done. And now if we do not regularly give those additional presents, which were only the marks of our good will, and tokens of the satisfaction we had in a governor's administration; every thing else that a governor enjoys is forgot, and we are charged both at home and abroad with the heinous crime of presuming to withhold the support of government. Thus we see how soon custom may become a law, how thirsty a thing power is, and how hard to be satisfied. "Claims, as the governor says, will never be wanting," and if the people will give "whenever they are required" to give, they may soon be "stripped of every thing they have a right to enjoy."

The governor is pleased to acquaint us, that all the fees and perquisites of this government do not amount, *communibus annis*, to more than a thousand pounds, meaning, as we suppose, sterling money. This the governor enjoys fully and freely, and we never interfere in his disposition of it, any more than in the proprietaries' disposition of the quit-rents. We think this a handsome support for a governor; and though he calls it only moderate fees for business done; yet if he can earn one thousand pounds sterling a year in such fees, the business must certainly be a good one.

On our saying that some proprietaries and governors of petty colonies assume more prerogatives and immunities than ever were claimed by their royal master, the governor grows warm in behalf of the proprietaries, and demands, with all the air of a person conscious of being in the right, what instances can you give of that assuming behaviour in your proprietaries; we answer, the present instance; for the king does not claim an exemption from taxes for his private estate, as our proprietaries do. Have they ever claimed any right or prerogatives not granted them by the royal charter, or reserved by that of their father? yes, the right of being exempt from taxes for their estate in Pennsylvania, when all their fellow-subjects (for the proprietaries are subjects, though the governor seems to disdain the term) both in England and America, not excepting even the lords and commons of parliament, are now obliged to undergo a tax for the recovery of part, and defence of the rest of that very estate. This right is not granted them by the royal charter, nor could it be reserved by their father's charter. Can you lay to their charge one instance of injustice or severity? This is an act of injustice and severity, to insist that the people shall not be allowed to raise money for their own defence, unless they will agree to defend the proprietary estates gratis. If this be complied with, and the war continues, what shall hinder them another year, when the fifty thousand pounds is expended, to require, that before we are allowed to raise another sum for the same purpose, we shall agree not only to defend their lands, but to plough them: for this their lieutenant may allege the "usage and custom" in Germany, and put us in mind, that we are chiefly Germans. Who can assure us, that their appropriated lands, so long kept untenanted and idle, are not reserved in expectation of some such fortunate opportunity? can other instances, in answer to the governor's questions be necessary? if he thinks it discreet to insist on more, they may soon be at his service.

We are then desired to turn our eyes on our own conduct, and charged in high terms with "taking upon ourselves great and mighty powers;

dispensing with positive laws, and claiming a right of disposing of all public money, a right of keeping our proceedings a secret from the crown, with, as the governor is pleased to say, many others, unknown to an English constitution, and never heard of in the other plantations." A round charge, but not more easily made than answered. The governor allows, "that we have all the powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the king's plantations in America;" and we neither claim nor practise any but what is usual in some or other of them. We claim no right of dispensing with laws. The right of disposing of our own money, we think is a natural right, and we have enjoyed it ever since the settlement of the province, and constantly been in the exercise of it in every instance, except perhaps in a few, where, on extraordinary occasions, we have chosen to make special appropriation by a particular law. It is also possessed and practised by several other assemblies. We have moreover the right of disposing of the present revenue by positive laws, which have received the royal assent. This natural and legal right, as we contend it is, was never denied us, or called in question, as we know of, but by our present proprietaries. Their ever hearty friend, the late governor's father, who had lived many years among us, and was skilled in our laws, in a solemn speech, recorded in our minutes, mentions this as one of our civil rights, among the other happinesses of our constitution, with which he was thoroughly acquainted. Our inserting therefore in the bill a clause, that the governor should have a voice in the disposition of the money intended to be raised, was partly in consideration that the proprietary was, by the bill, to contribute in proportion to his estate, and to avoid unseasonable disputes; but since we are daily more and more convinced that the governor is no friend to our country, and takes a pleasure in contriving all possible methods of expense, to exhaust our funds, and distress our affairs (of which the present exorbitant demand of five thousand pounds, besides what we have already paid, for cutting a road, an undertaking he engaged us in on a computation of its costing eight hundred pounds, and which if this be due must cost us about an hundred pounds per mile) it will become us to be more particularly careful how our public money shall be expended, when the greatest sums which can be raised upon this young colony must fall so far short of what may become absolutely necessary for our common security.

That we claim a right of keeping our proceedings a secret from the crown, another of the governor's groundless accusations, has been twice refuted, and is yet a third time courageously repeated; though all the province knows that our votes and proceedings are every year printed and published, and have been so for these thirty years past and more. Equally groundless are the [many others] which the governor forbears to particularize. Could he have thought of one that had the least apparent foundation, he would not have spared to mention it.

Plans and schemes of aggrandizing ourselves the governor has often charged us with, and now repeats the charge. He affects to consider us as a permanent body, or some particular order of people in the state, capable of planning and scheming for their own particular advantage, distinct from that of the province in general. How groundless this must be, is easily conceived, when it is considered, that we are picked out from among the people by their suffrages, to represent them for one year only; which ended, we return again among the people, and others may be, and often are chosen in our places. No one of us knows a day before the election that he shall be chosen, and we neither bribe nor solicit the voters, but every one votes as he pleases, and as privately as he pleases, the election being by written tickets folded up and put into a box. What interest can such a body have, separate from that of the public? What schemes can a set of men, continually changing, have, or what plans can they form to aggrandize themselves, or to what purpose should they have or form them? If the little power allowed us by the constitution was fixed in our particular families, and to descend to our heirs, as the proprietary power does in their family, we might then be suspected of these aggrandizing plans and schemes, with more appearance of probability. But if any of us had such schemes, the want of a single vote in any election might totally disconcert them, there being no tenure more precarious than that by popular esteem or favour.

The governor next considers what we have said relating to the act for raising county rates and levies, and is pleased to say, that "he does not see why the proprietary estate in each county is not benefited in common with other estates, and by the same means." That the proprietaries' estate should be excused in a county rate, at least so far as that rate is levied for the payment of assembly-men's wages, appears to us equitable; for it would seem unreasonable to tax an estate to defray their expenses, if the possessor had no vote in choosing a representative in that house. But we conceive it is widely different in a provincial tax, where the common interest and security of all are concerned; and yet if the proprietaries should purchase estates which have usually been taxed by the county rate and levy act for that purpose, we presume those estates ought to continue to pay their assessments. It was the opinion of the solicitor-general in king William's time, that the lords had no right to vote in the elections of a commoner, because they were not contributors to the expenses of a knight of the shire or burgess; and they were not contributors to that expense, because they were of another house. But if they purchased lands which were, before such purchase, chargeable with those expenses, those lands should, notwithstanding that purchase, continue chargeable therewith by law; although before the act, the lands the lords were seised of, or purchased, were excused from that charge. But though such lands were excused from these rates, will any one from thence allege, that the lords are exempted from paying the national taxes? as for the rest of the expenses provided for by that act, we thought, as the proprietary cultivated no lands in any of the counties, but let them lie for a market, he had probably no sheep that might suffer by wolves, poultry by foxes, or corn by crows and blackbirds, &c. and therefore might reasonably be excused from those taxes that were to raise money to destroy such vermin. But on farther consideration, we are willing to give up that point to the governor, and agree that their estates may on other considerations be equally benefited; concluding withal, that they ought therefore equally to pay. For as to the conditions of consent the governor mentions, they are merely

imaginary, though the governor speaks of them with the same apparent assurance as if he had the contract between the then governor and assembly under hand and seal in his possession. The exempting proviso in that act, the governor says, is "declarative of the rights of the proprietaries' station, of which the people in general might be ignorant." Be it so then, and let us see what are the words: "*Provided also, that the proprietary and governor's estate shall not be liable to be rated and assessed, by virtue of this act.*" We submit. Their estate must not be taxed by virtue of that act, for the purposes intended by that act: 'tis the right of their station, it seems. But is this a reason why they should not be taxed by any other act, for any other purposes, or by another act for the same purposes, when it shall become reasonable and necessary?

There is in the same act, an exemption from the same tax, of all "unsettled tracts or parcels of land, belonging to any person whatsoever. Is this too, declarative of the right of such landholder's station, and does it expressly declare, that those gentlemen are "not liable to taxes?" if so, why did not the governor object to that part of our bill likewise, which proposes to tax all located lands, on this occasion, whether settled or unsettled. Those plain words, the proprietary estate shall not be liable to be rated by virtue of this act, must be stretched on the rack before they can be extended, as the governor extends them, to a general declaration, "that the proprietary estate is not liable to taxes." But he is a dextrous disputer, and can at pleasure change the meanings of the plainest words, and make them signify more or less, as it suits his purpose. As, for another instance; we had asked this question, "whether, supposing the proprietary estate to be taxed, it would be equitable that he should have a negative in the choice of the assessors, since that would give him half the choice, though he were to pay perhaps not a hundredth part of the tax?" the governor eagerly lays hold of these very loose and uncertain words ["though he were to pay perhaps not a hundredth part"] which are introduced merely for the argument sake, and construes them into a determination of what would be the proprietaries' proportion, which he is pleased to agree to, by telling us, "I think with you that the proprietary tax would not be more than a hundredth part of the whole," when 'tis plain we had no thought at all of fixing any proportion to be paid by the proprietary estate, or any other estate, being destitute of the proper informations, and having by the bill left that matter to the commissioners and assessors, who were to have before them the constable's returns, and to be sworn, or solemnly affirmed, to do equal justice, after informing themselves of the value of estates in the best manner they could, by all the means in their power. But had we mentioned thousandth or ten thousandth part, we make no doubt the governor would have been complaisant enough to think with us in that particular, though we should differ in every thing else.

The governor "cannot easily conceive," he is pleased to say, "that a negative upon a choice is half that choice, or indeed any part of it." We think a negative may be in effect more than half the choice, and even amount to the whole, if it be repeated till there is no choice left but that which the possessor of the negativing power chooses. The peers of Great Britain have no vote, nor can they intermeddle in the election of a commoner: and yet the commons claim it as a fundamental right to subject their estates to taxes by a bill, the whole of which the lords must either refuse or pass. And that august body, who contribute so largely to the public stock, acquiesce in it as a sufficient security for their estates. But our proprietaries are unhappily of different sentiments, and cannot think themselves safe, unless their whole estate here be entirely exempted, and the burden of defending it become an additional weight to the taxes on our mother country, and on the freemen of this and the neighbouring colonies.

The governor is grievously offended at an expression in our message, that we have in our bill allowed him a share in the disposition of the fifty thousand pounds; and thunders over us in a storm of angry questions, "Is it from you, gentlemen, that I derive the right of governing this province, or from your allowance that I have a voice in the legislature? are you the sovereign disposers of power? have you the right to give and take away at pleasure? if not, whence that lofty claim of allowing the governor a share in the disposition of the public money?" if the governor will but have a little patience, we shall endeavour, by a few cool sober questions, to explain this matter to him as well as we are able. Are not all money bills to take their rise in the house? can he possibly have any share in the disposition of public money if it is not raised? and can it be raised without our allowance? has the governor a right to make any amendments to a money bill? if, therefore, a clause is put into such bill, giving him a voice in the disposition of our money, must not such clause be first allowed by us to be inserted? to what purpose then were all those haughty questions? we shall answer them in a few words. We are not "the sovereign disposers of power;" nor does the governor "derive from us the right of governing this province;" it were a vain thing in us to say it, since his being our governor would alone be a sufficient proof to the contrary.

The governor is pleased to say, that he studiously avoided every thing that could renew the disputes subsisting between us; and earnestly recommended the same temper of mind to us. This may be right, so far as relates to his first speech at the opening of the session; but in his amendments to our bill, it appeared to us, that he studiously proposed every thing that he thought could disgust us, in hopes of engaging us in some other dispute than that on taxing the proprietaries' estate, and of making the bill with the session ineffectual and abortive. Why else, among other things, did he strike out that harmless part of the preamble, which gave, as a reason for the bill, the exhausting of our treasury by our late expensive grants of provisions, &c. to the king's use. He did not choose the bill should mention any thing we had done, lest by that means it should reach the royal ear, and refute his repeated accusations that we "had done nothing, nor would do any thing, for defence of the country;" when he knows in his conscience we have given all in our power; and it was well we had it in our power to give something, otherwise neither the British nor New England troops would have had the provisions we furnished; for could the governor possibly have done it, we have reason to believe he would have defeated our grant; he can no more bear to let us

do any thing commendable, than he can bear to hear what we have done mentioned.

It is true the governor recommended a good temper of mind to us; he can make plausible speeches, that will read well in other places where his conduct is not known. Indeed they appear not so much to be made for us as for others; to show the ministry at home his great zeal for his majesty's service and concern for the welfare of this people! and to recommend himself, as it should seem, to some better post hereafter, rather than to obtain the present points that seem to be persuaded. For of what avail are the best speeches, not accompanied with suitable actions? he has recommended despatch in very good words, and immediately hatched some dispute to occasion delay. He can recommend peace and unanimity in fine and moving language, and immediately contrive something to provoke and excite discord; the settled scheme being, not to let us do any thing that may recommend us to those with whom he would ruin us. He would appear to be in great earnest to have something done, and spurs violently with both heels, but takes care at the same time to rein in strongly with both hands, lest the public business before us should go forward. When we offered him to raise money on the excise, a method long in use, and found easy to the people, he quarrelled with us about the time of extending the act, complained it would raise too little, and yet was for shortening the term. Obsolete instructions were mustered up against it, though acts of the same kind had been since passed by the crown. Acts of parliament made for other colonies were to be enforced here, and the like. Then he called out for a tax, which the proprietaries themselves (in their answer to our representation) allowed to be the most equitable way of raising money; thinking, it is like, that we should never agree to a tax. But now when we offer an equitable tax on all estates real and personal, he refuses that, because the proprietaries are to be taxed!

The governor thinks himself injuriously treated by our request, "that he would not make himself the hateful instrument of reducing a free people to the abject state of vassalage," and asks, "what grounds have you, gentlemen, for this heavy charge? what laws of imposition abhorrent to common justice and common reason have I attempted to force down your throats?" &c. A law to tax the people of Pennsylvania to defend the proprietary estate, and to exempt the proprietary estate from bearing any part of the tax, is, may it please the governor, a law abhorrent to common justice, common reason, and common sense. This is a law of imposition that the governor would force down our throats, by taking advantage of the distress of our country, the defence of which he will not suffer us to provide for, unless we will comply with it. Our souls rise against it. We cannot swallow it. What other instance would the governor desire us to give of his endeavouring to reduce us to a state of vassalage? he calls upon us for an instance. We give him the very law in question, as the strongest of instances. Vassals must follow their lords to the wars in defence of their lands; our lord proprietary, though a subject like ourselves, would send us out to fight for him, while he keeps himself a thousand leagues remote from danger! vassals fight at their lords' expense, but our lord would have us defend his estate at our own expense! this is not merely vassalage, it is worse than any vassalage we have heard of; it is something we have no adequate name for; it is even more slavish than slavery itself. And if the governor can accomplish it, he will be deemed the hateful instrument (how much soever he is disgusted with the epithet) as long as history can preserve the memory of his administration. Does the governor think to exculpate himself, by calling upon us to prove him guilty of crimes we have never charged him with; whose liberty have I taken away? whose property have I invaded? if he can force us into this law, the liberty and property, not only of one man, but of all men in the province, will be invaded and taken away; and this to aggrandize our intended lord, increase and secure his estate at our cost, and give him the glorious privilege that no British nobleman enjoys, of having his lands free from taxes, and defended gratis. But what is the loss of even liberty and property, compared with the loss of our good name and fame, which the governor has, by every artifice, endeavoured to deprive us of, and to ruin us in the estimation of all mankind. Accusations secretly dispersed in the neighbouring provinces and our mother country; nameless libels put into the hands of every member of parliament, lords and commons! but these were modest attacks compared with his public messages, filled with the most severe and heavy charges against us, without the least foundation; such as those in his message of the sixteenth of May last; some of which, though then fully refuted, he now ventures to renew, by exclaiming in these terms, had you any regard for your bleeding country, would you have been deaf to all the affectionate warnings and calls of his majesty? and would you have refused the proper, necessary, and timely assistance to an army sent to protect these colonies?" for it is not well known that we have essayed every method, consistent with our rights and liberties, to comply with the calls of the crown, which have frequently been defeated either by proprietary instructions or the perverseness of our governor? did we not supply that army plentifully with all they asked of us, and even more than all? in testimony of which, have we not letters from the late general, and other principal officers acknowledging our care, and thanking us cordially for our service? these things are well known here; but there is no charge that the governor cannot allow himself to throw out against us, so it may have the least chance of gaining some small credit somewhere, though of the shortest continuance.

In fine, we are sincerely grieved at the present unhappy state of our affairs; but must endeavour patiently to wait for that relief which Providence may, in due time, think fit to favour us with, having, if this bill is still refused, very little farther hopes of any good from our present governor.

The governor's reply, September 24, 1755.

GENTLEMEN,—In the course of my short administration among you, I have often regretted, that at a time when it becomes every one of us to be consulting and acting for the public good, you should still delight to introduce new and unnecessary disputes, and turn the attention of the people from things of the last importance to their future safety.

Your very tedious message of the nineteenth of August, is a sufficient proof of your temper of

mind; it is indeed of such an inflammatory nature, that did not the duties of my station and justice to the people require me to take some notice of it, I should think it beneath me as a gentleman to make any reply to a paper of that kind, filled with the grossest calumny and abuse, as well as the most glaring misrepresentations of facts; and what I shall now say in answer to it would have been said in your last sitting, had you not adjourned yourselves so soon after the delivery of it, that I had not time.

You set out with claiming it as a privilege to have your bills granting supplies passed as they are tendered, without amendments, and say, "it is far from being an ordinary method to receive or debate upon amendments offered by the governor."

This claim is not warranted by the words of the charter, nor by the usage of former assemblies, and you yourselves must know, that from the first settlement of the province to the latter end of the administration of Mr. Hamilton, my immediate predecessor, the governors have occasionally amended bills for raising money, and their right of doing so was never till then contested.

Notwithstanding all you have said as to my offer of lands to the westward, I am persuaded unprejudiced men will see it in its true light, and be convinced it was made with a good intention, and under a proper authority; I mentioned my commission of property in contradistinction to the commission of government, as that under which I granted lands upon the common and ordinary occasions, which you seem to think was done under the other. But as to the offer in question, I had such directions from the proprietaries as were sufficient to justify me in making it, and would have been obligatory on them to confirm the same to the adventurers; and this I did then, and still do, think a good authority.

As you do not profess to understand law, I am not surprised at your quoting an abridgment instead of the case abridged. Viner, who is no authority, may have the words you mention for aught I know, and may be of opinion that the king can purchase and hold lands in his private capacity, but in that he has the misfortune to differ from my lord Coke, and other writers of note and authority in the law.

Your answers to what you call my round charge, and to what you afterwards call my haughty questions, are, by no means, conclusive; I grant that no public money can be raised, nor any clause enacted for the disposition of it, without your consent, but is not mine equally necessary? whence is it then that I should be thought more obliged to you for a voice in the disposition of public money, than you are to me, seeing the obligation (if any) is reciprocal; the money remaining in the people's pockets cannot be taken from thence, till I think a law necessary for that purpose, and shall I have less power over it after it is raised, and in the public treasury, than I had before? the common security of the people requires that they should not be taxed but by the voice of the whole legislature, and is it not equally for their security that the money when raised should not be disposed of by any less authority? Your claim therefore of a natural exclusive right to the disposition of public money, because it is the people's, is against reason, the nature of an English government, and the usage of this province, and you may as well claim the exclusive right to all the powers of government, and set up a democracy at once, because all power is derived from the people; and this indeed may be the true design.

As to what you insinuate concerning the enormous growth of the proprietary estate, I shall oppose plain facts to your presumptions. By the original concessions and agreement between the late Mr. William Penn and the first settlers, nine tenths of the land were to be granted to the adventurers, and the remaining tenth to be laid out to the proprietary; but instead of this, the late proprietary, out of the lands purchased of the Indians in his time, contented himself with taking up but a very small part of what he might have done under that agreement; and out of the three Indian purchases made by his sons since his death, in the two first, consisting of four million acres of land, they did not survey upwards of twenty-five thousand acres, and those neither of the richest nor best situated; and in the last, which is by far the largest of all, no surveys have been made for their use, but they gave early directions, that the settlers should, as they applied, take their choice of the best lands, and accordingly great numbers of people are seated on these lands, to their entire satisfaction. As to their manors and appropriated tracts, it is well known that they are mostly settled by persons without leave or title, and that these pay their share of all taxes; in short, gentlemen, if instead of setting the proprietaries forth as increasing their estates, and using their tenants like vassals, you had represented them as forbearing with them, and using no compulsory methods for the obtainment even of their just debts, and that for these and many other instances of their kind usage of them, the proprietaries are entitled to the character of good, nay of the best landlords, you had done them no more than justice, and said only what is notorious to all that know their treatment of the people in this province.

I can by no means allow you to argue justly in saying that the proprietaries ought to submit their estate to be taxed by assessors chosen by the people, because they are sworn or solemnly affirmed to do equal justice. When you are taxed by these assessors, it is by persons who may be considered as your equals, and who are interested to do you justice, as you in your turns may become their assessors. But the proprietary estate and interest being considered as separate from yours, because the proprietaries are a separate branch of the legislature, they can never in that view be taxed by any persons, unless those whose interest it is to save their own estates by throwing an unequal burden upon the proprietaries; and you must know that this is the very consideration upon which the law in certain cases excepts against both the judgment and evidence of interested persons, lest they should be influenced therein, even against the solemnity and obligations of an oath.

You say, that "all estates in Britain, and her colonies, now bear, or must bear, a tax to free the proprietary estate from encroachments and incumbrance." Invidious and ungrateful insinuation! is there nothing but this at stake! is it for a tract of unsettled country, belonging to the proprietaries of this province, that the eyes of all Europe are turned upon this continent, and such mighty preparations making both by sea and land; or, gentlemen, can you think that if the enemy are suffered to keep up fortifications in any private estate whatsoever within the limits of this province,

you could preserve your estates, or the English nation preserve its dominions? what end then can such insinuations serve, but to cool the ardour of his majesty's good subjects in recovering the country unjustly taken from them, as if they were contending for a thing of no consequence, which is but too much the opinion of many amongst us, raised and confirmed, no doubt, by your strange conduct.

You charge me with contriving all possible methods of expense to exhaust your funds, and distress your affairs, and give an instance of an exorbitant demand of five thousand pounds for cutting the road for the use of the army, an undertaking you say, I engaged you in on a computation of its costing only eight hundred pounds. How could you stumble on a matter which, on a very slight examination, must appear to be without the least foundation? your own minutes will show that you resolved to bear the charge of cutting two roads, one to Will's creek, and the other to the Monongahela, and in one of your messages to me, wherein you enumerate your meritorious acts, you set this road to the Ohio particularly forth in such a manner as to have it believed, that it would prove a heavy expense, which, nevertheless, you would not decline to bear, as the king's service required it; and now you insinuate, that had you known it would have cost more than eight hundred pounds, you would not have undertaken it, and this for no other reason than to lay to my charge a pretended estimate, of which I am totally ignorant, having never seen or heard of one. The sum of eight hundred pounds might have been mentioned as what it would cost in some men's private opinion, but not upon an estimate of the commissioners, nor as such sent to me. To be plain, gentlemen, it was the resentment and menaces of the officers in the army, entrusted with that part of the king's service, because the work was not begun in time (and it could not have been begun sooner by me, as you would not sooner comply with my request) it was I say your dread of having proper representations made of your conduct at home, and of an armed force being used to oblige the inhabitants to do this necessary work, and nothing else, that induced you to engage to bear the expense; and had the two roads been cut, they would have cost a very great sum indeed, but by a representation I caused to be made to the general, he consented to drop the road to Will's creek, and instead of extending the other to the Ohio, to order it to be opened no farther than to the Crow-foot of Ohiogainy, which last saved the clearing of many miles. He likewise consented, that the road should not be made so wide by one third as the quarter-master general had given directions for. These were great savings to the province, which, added to the regulations that were made in the price of provisions and liquor, and in the hire of the wagons, would at any other time have induced you to speak in commendation of my care and frugal use of the public money, and not to charge me with a demand that I never made, nor indeed could it have been then made by any one, because the accounts were not come in, and now that they are delivered to you, it does not appear that they will amount to the sum of three thousand pounds, which is not extravagant, when you consider the distance and expedition required in the work. The commissioners, instead of being reproached with extravagance, have a right to the amplest acknowledgments for their exposing their persons to such imminent danger, and carrying on the work with so much spirit, and so becoming a zeal; and though my recommendations may not have much weight with you, yet as they were engaged in this hazardous work by my entreaties, justice requires they should be handsomely rewarded for their indefatigable attendance and generous advance of their own private fortunes.

You have, in the message now before me, and in several others, taken great pains to infuse into the minds of the people, particularly the Germans, that the government have designs to abridge them of their privileges, and to reduce them to a state of slavery. This may, and will, alienate their affections from his majesty's government, destroy that confidence in the crown and its delegates, which, at this time, is particularly necessary, and render all the foreigners among us very indifferent as to the success of the French attempts upon this continent, as they cannot be in worse circumstances under them, than you have taught them to expect from the king's government.

This you may, with your usual confidence, call duty, loyalty, and affection to his majesty, but I am convinced it will not be esteemed such by his majesty and his ministers, before whom all these matters must be laid.—And how the innocent people of this province may be affected thereby, time will show.

You are pleased to tell me, that I am destitute of skill and abilities for my station, and have not the spirit of government in me. Gentlemen, I have never made any boast of my abilities, nor do I pretend to know what you mean by the spirit of government. But this I know, that if I had enough of the spirit of submission, I was early given to understand, by some of your messages, that you would have then pronounced me well qualified for the administration of this province, even without the assistance of instructions, or the advice of my council.

To your spirit of government, however, or in other words, your inclinations, to increase and render permanent your own powers, is to be attributed all your late, extraordinary proceedings, and the defenceless state of the province; for the sake of gratifying this, you scruple not to stir up his majesty's subjects against his government, forgetting all duty to your sovereign, and all decency to those in authority under him.

Your answers do not exculpate you from my charges against you for taking on yourselves great and mighty powers, and since you call upon me to particularize them, I shall gratify you. You have created a paper currency of your own, and ordered the collectors of excise, and the trustees of the loan-office to receive it against law; you pay your own wages out of the provincial money when the law requires and provides for their being paid in another manner. Notwithstanding it is declared by law, that no persons indebted on mortgages to the loan-office shall be delinquent in their payment above a year, and your committees are enjoined, in the settlement of their accounts, to reckon all such outstanding, as cash in the trustees' hands, yet this you have dispensed with in the settlement of the trustees' accounts year after year, and suffered the borrowers to continue in arrear for years, many of them for not less than ten. A practice tending to depreciate the value of the money, and greatly injurious to the borrowers. And lastly, instead of the oaths

required by law to be taken to his majesty by all men in public office, you have taken upon you to administer the affirmation to your clerk, and several of your own members, though not of the people called quakers, not at all scrupulous against taking an oath, which deprives his majesty of the security provided by law to be given by such as hold offices, or act in public trusts.

You have often mentioned what you have done to promote the success of his majesty's arms under general Braddock, and for the defence of the province, and say, you have letters from the late general, thanking you for your service; the truth of this I must beg leave to question, as the late general was too honest to say one thing to you, and another to the king's ministers. He might acknowledge the services of particular men, but how you can take those to yourselves as an assembly, when you had no hand in what was done, I am at a loss to know. I think it will not be doubted, but that had you in time opened the proper roads, raised men, and provided carriages, and necessary provisions for the troops, as this was the only province able, in the general's situation, to furnish him with them, we might now have been in peaceable possession of fort Duquesne.

In fine, gentlemen, I must remind you, that in a former message you said you were a plain people that had no joy in disputation. But let your minutes be examined for fifteen years past, not to go higher, and in them will be found more artifice, more time and money spent in frivolous controversies, more unparalleled abuses of your governors, and more undutifulness to the crown, than in all the rest of his majesty's colonies put together. And while you continue in such a temper of mind, I have very little hopes of good, either for his majesty's service, or for the defence and protection of this unfortunate country.

The assembly's rejoinder, Sept. 29, 1755.

MAY IT PLEASE THE GOVERNOR,—The sincerity of the governor's regret at the "unnecessary disputes" which subsist between us, the very first paragraph of his message gives us some room to question; since it begins with a new charge, that those disputes are of our introducing, and that we delight to introduce them to turn the attention of the people from "things of the last importance to their future safety." This charge itself seems designed to introduce another unnecessary dispute, since all that are acquainted with our disputes know by whom they were introduced, and who it is that delights in disputing.

That our message of the nineteenth of August was "a very tedious" one to the governor we make no doubt. It must have been so in the matter, and might probably be so in the manner. There was too much truth in it, and too little flattery. We suppose too, that the task of answering it might be as tedious as the message itself; since, to shorten the work, he has passed over a number of the most important points, and all our reasonings upon them, without attempting an answer. And we think he cannot justly complain of want of time to answer that message, since we sat four days after delivering it, adjourned for near four weeks, and had been met again nine days before we received the answer, which, now we have it, we find to be such an one as might have been made in a few hours. But had our message really been "filled with the grossest calumny and abuse," as the governor says it was, we cannot think, with the governor, that it would therefore have been "beneath him as a gentleman to make any reply to it." If we were of that sentiment, we should make none to the message we are now considering. We think, that what is beneath a gentleman, is, not the answering of calumny, but the making use of it. And we wish, for the governor's sake, that he had been of the same opinion; for he might then probably have treated us in a manner more suitable to his character as a gentleman, and had more regard to the preservation of that character.

The governor denies, that our claim of the privilege "of having our bills granting supplies passed as they are tendered without amendments, is warranted by the words of the charter;" though it gives us "all the powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the king's plantations in America." If the free-born subjects of England do not exercise this right by their representatives in parliament, and it is not usual in any of the king's plantations in America; then we are in the wrong to claim it, and the governor is right in denying it. But facts are for us; and these, in this case, the governor does not deny. Our predecessors may in some few instances have waived that right, but they have never given it up, nor will, as we hope, to those that shall succeed us. We trust they will rather be more cautious of suffering such dangerous precedents, when they see how fond governors are of seizing the advantage for diminishing our privileges.

We agree with the governor, that what we have said as to his offer of lands to the westward, will not hinder unprejudiced men from seeing it in its true light; we think our remarks have rather contributed to that end, and even assisted those that might before be prejudiced; but are at a loss to conceive how either the prejudiced or unprejudiced could be "convinced" the offer was "made under a proper authority," when neither of the governor's commissions, not even that which he calls "the foundation of property," gave him such authority; and he is now reduced to the necessity of dropping them, and recurring to private instructions, never mentioned before; of which none can judge till he shall think fit to produce them. But all may judge how well he has acquitted himself of the imputation of attempting to impose on the public, by introducing the commission of property as an authority for the offer; so we shall spare the governor on that head, and press it no farther.

If the governor had given himself the trouble of looking into Viner, under the title we mentioned, he might there have found the case abridged referred to; we, it seems, not being lawyers, quoted improperly; but he, though a lawyer, refers us to lord Coke, without page, case, or volume; and to "other writers of note and authority in the law," without so much as naming their names; so that we are utterly at a loss where to find the law part of his messages; but the politics and the calumny we can easily trace to their fountain head, though he does not vouchsafe to quote it at all. The perfect sameness of sentiment, and even of expression, are sufficient to show, that they are all drawn from a late famous libel, entitled, "*A brief state of the province of Pennsylvania;*" an author, of whom, if we do not say, as

the governor says of Viner, that he has no authority; yet we may say, that his authority diminishes daily, the more we see of his works.

The governor is pleased to say, that "the common security of the people requires that they should not be taxed but by the voice of the whole legislature;" and that "we might as well set up a democracy at once, as claim an exclusive right to the disposition of public money." To this we beg leave to answer, that though we are not so absurd as to "design a democracy," of which the governor is pleased to accuse us; yet in this particular, all our late attempts to raise money "for the common security of the people," being obstructed and defeated by the governor's having a voice in that matter, would rather induce us to think, that his having such a voice, is not best for their security; and such a conduct in a governor, appears to us the most likely thing in the world to make people incline to a democracy, who would otherwise never have dreamt of it.

But the governor is pleased to tell us, that "our claim of a natural exclusive right to the disposition of public money, because it is the people's, is against reason, the nature of an English government, and the usage of this province. He has, however, never produced that reason to us; and we still think, that as every man has, so every body of men have a natural right to the disposition of their own money, by themselves or their representatives: and that the proprietary's claim of voice in the disposition of money to which he will contribute no part, is a claim contrary to reason. The wisdom of the crown has thought fit to allow different constitutions to different colonies, suitable to their different circumstances; and as they have been long settled and established, we apprehend that if the governor could have power to unsettle them all, and make in every one such changes as would be necessary to reduce them to a conformity with his idea of an "English government," the reformation would be productive of more inconvenience than advantage. The general "usage of this province" in the disposition of public money, was ever what it now is; and as the province has flourished with it, and no inconvenience has attended it, we hope it will still continue. Particular laws may, in a very few instances, have given the disposition of particular sums to the governor, or to commissioners, for particular services; but a few such instances do not make an usage, and the governor must in that point have been greatly misinformed.

It is agreed, that in the concessions mentioned by the governor, the proprietary reserved in every hundred thousand acres ten to himself; but then (to make the governor's "plain fact" a little plainer) he was to have it by lot, and not by choice; the quantity so reserved was to lie but in one place; and he was "bound to plant or man it within three years after it was set out and surveyed;" or else (by the next concession) it was "lawful for new comers to settle thereupon, and he to go higher "up for his share." This might induce him not to take up more than he could conveniently settle; but can give his successors no right to pick here and there the best vacant pieces among the settlements, excluding other rights; nor to keep the land-office shut, as was done after the second mentioned purchase, till they had garbled the best tracts for themselves and dependants, and left little besides rocks and barren mountains for the rest of the people. The third and last purchase being made but the last year, and the land mostly exposed to, or, as the governor has often informed us, in the hands of the enemy, we are surprised to hear that "great numbers of people are seated on it to their entire satisfaction;" and more so, that the proprietaries' manors and appropriated tracts are mostly settled by persons that pay their share of all taxes. If this be so, we must own ourselves as much unacquainted with the state of his lands, as we are with the state and management of the land-office, which of late, indeed, is pretty much a mystery. That the proprietaries are entitled to the character of the best landlords, we can by no means presume to say with the governor; since his majesty's lands are granted without purchase money, on half the quit-rent, and the quit-rents are applied to the support of government and defence of the country; we cannot therefore but be of opinion, that the king is a much better landlord.

If the governor would please to consider, that it does not fall to the share of perhaps one man in five hundred to be an assessor during his whole life, and that the chance of being favoured or not by a succeeding assessor, as he himself shall behave in that office, is proportionably small; and that the very little which can possibly be saved in his part of the tax, by unjustly enhancing that of the proprietaries, is a matter next to nothing; the governor certainly cannot have so ill an opinion of mankind, as to believe these temptations can be sufficient to induce a commonly honest man to forswear himself; and assessors are seldom men of the meanest characters for integrity. But surely, a security that all the peers in Britain think sufficient with regard to the equity of taxation on their estates, might be confided in by our proprietaries; unless the people here are much more depraved than we can possibly conceive them to be.

Our argument, that, if all the estates in Britain and her colonies now bear or must bear a tax to free the proprietary estate from encroachments, that estate itself ought not to be exempted, the governor calls "an invidious and ungrateful insinuation!" and asks, "is there nothing but this at stake? is it for a tract of unsettled country, belonging to the proprietaries of this province, that the eyes of all Europe are turned upon this continent, and such mighty preparations making both by sea and land? or, gentlemen, can you think that if the enemy are suffered to keep up fortifications in any private estate whatsoever within the limits of this province, you could preserve your estates, or the English nation its dominions? what end then can such insinuations serve, but to cool the ardour of his majesty's good subjects in recovering the country unjustly taken from them, as if they were contending for a thing of no consequence, which is but too much the opinion of many amongst us, raised and confirmed no doubt by your strange conduct." Had we asserted that the proprietary estate only was in danger, and argued thence, that estate alone ought therefore to pay for its recovery or security, all this strain of the governor's eloquence might then have been very just and proper: but, may it please the governor, we did think there was something else at stake; we thought other estates in danger, and therefore offered a very large sum, as our share of the expense, in the bill for granting fifty thousand pounds to the king's use. But we thought the proprietary estate at least as much in danger as any other estate, and therefore imagined it ought to pay its proportion

towards the expense of its own security. The governor it seems thinks otherwise, and because other estates are likewise in danger, the proprietary estate ought to be exempted; and unless we will agree to recover and defend that gratis, we shall not be permitted to raise money for the defence of our own estates, our neighbours, or our sovereign's dominions. This is our present situation, and we cannot help it; for the proprietary instructions are, it seems, as unalterable as the laws of the Medes and Persians. But let it be known to them, and to all, it is not our insinuation, invidious as it may seem to the governor, and ungrateful to his ears, that cools the ardour of his majesty's good subjects; but if any thing cools that ardour, it must be the fact insinuated, the proprietaries claiming that invidious and odious distinction, of being exempted from the common burdens of their fellow-subjects. If there be any who think the nation is contending for a thing of no consequence, it must be those who refuse to contribute their share, and not we who offer largely—and that opinion in others, if such an opinion there be, must be raised and confirmed by the governor and proprietaries' strange conduct, and not by ours.

The governor says, we "lay to his charge a pretended estimate (of the expense of cutting the roads) of which he is totally ignorant, having never seen nor heard of one." Is it possible that the governor can have forgotten it? he told us in his message of the eighteenth of March, that he had "appointed commissioners to reconnoitre the country, mark out where such roads might most conveniently be made, and make report to him of their proceedings, with an estimate of the expenses that would attend the opening and clearing them." On the application of the governor, in that message, the house sent up a bill, giving twenty-five thousand pounds to the king's use, wherein, among other things, the clearing of road for the king's service was provided for. But, may it please the governor, did the commissioners never comply with their instructions, and make that estimate? or, if they made it, did the governor never lay it before the house? 'tis true we have not that estimate now in our possession; it was returned again to the governor; but we all remember the sum, and that it was eight hundred pounds. If it was indeed, as the governor says it might possibly be, "only some men's private opinion," yet it was an estimate, and sent to us by the governor; whether made by the commissioners, or by others, we have not said (though we think it was by the commissioners) nor is it material; however, we have remaining in the house a subsequent letter from one of the commissioners, to the secretary, dated May the third, which says, "We sent you a draught of the road, both to the waters of the Yohiogani and to the Camp, with all the principal places marked that occurred to us, with the amount of the charges of laying out both, and an estimate of the expense of opening and bridging the road to the Yohiogani from the Tuscarora mountain; that to the Camp will not cost so much in proportion to its length, because it is less hilly; but we expect amendments upon it, so as to come into the other near the top of Sideling hill, and avoid two crossings of Juniata, and also to cut off several miles between the Devil's hole and the Camp. Both roads will leave little of fifteen hundred pounds; for it is impossible to tell what expense unexpected occurrences will arise to." By this it appears, that an estimate was made by the commissioners, and that the governor either "saw or heard of it" seems probable, since he sent down this very letter to the house; at least he must have heard of the second estimate, contained in this letter, that "both roads would leave little of fifteen hundred pounds." The house however voted still to bear the expense of cutting both roads, though the first sum was nearly doubled, and the refusal of their bill by the governor would make it more difficult to be complied with. We have also in our hands another letter from the same commissioner, dated fifteen days after the former, wherein, after more experience in the work, he makes a third estimate, judging that the "expense of opening both roads will be little under two thousand pounds." This estimate the governor must surely have "seen or heard of," since the letter is to himself, and by him laid before us. After all these estimates gradually rising from eight hundred to two thousand pounds, the design of opening one of the roads was drop, the intended breadth of the other was reduced one third, its intended length shortened, and even that shorter extent never completed; and yet though it was supposed we had paid near one thousand pounds in money and provisions, we were given to understand that five thousand pounds more was wanted. Had we not reason to be surprised at this; and to suspect some extravagance in the management.

But the governor is pleased to tell us, not only that we charged him with an estimate that he never saw, but likewise that we "charged him with a demand that he never made." We happen, however, to have the original letter from his commissioners, which he laid before the house on the ninth of August, wherein are these words: "Shippensburg, August 4, 1755.—Honoured sir, We have appointed a meeting of the commissioners for the roads leading to the Ohio, at this town to-day, in order to fall upon measures to provide money for the payment of the labourers, &c. employed in the service of the roads; and we have thought of this expedient (with submission to your honour's better judgment) that some person or persons should be appointed by your honour to bring up money, and to be satisfied with our settlement of the accounts. We cannot at present inform your honour of the just sum of money that will be wanted for the above purpose; but we think it will amount to five thousand pounds. As the people are much in want of money, we shall be glad how soon the money can be sent, &c." This letter was signed by the six commissioners, and sent down to the house by the governor; to what end, unless that we might furnish him with the sum required? yet now he knows nothing of this demand, and is pleased to say, "it could not have been then made by any one, because the accounts were not come in," as if a demand in part was a thing impossible, before a settlement. The accounts however are at length come in, and under examination, and it will now soon be seen, what cause we shall have to commend the governor's or the commissioners' frugality: and we hope we shall not be backward to do it justice.

The governor's judgment of our motives to engage in this work of opening the roads, seems to us a very uncharitable one, but we hope to find more equitable judgment elsewhere. We are obliged to him, however, for owning that we did

engage in it at all. For as he is pleased to lay it down as a maxim that we are very wicked people; he has shown in other instances, when we have done any good, that he thinks it no more injustice to us to deny the facts, than now to deny the goodness of our motives. He would however think himself ill-used if any part of his zeal in that affair was ascribed to the menaces directed to him; or to a view of accommodating by the new road the lands of the proprietaries' new purchase, and by that means increasing the value of their estate at our expense.

The governor is next pleased to tell us, "that we have taken great pains to infuse into the minds of the people, particularly the Germans, that the government have designs to abridge them of their privileges, and to reduce them to a state of slavery. That this may, and will alienate their affections from his majesty's government, and destroy that confidence in the crown and its delegates, which, at this time, is particularly necessary, and render all the foreigners among us very indifferent as to the success of the French attempts upon this continent, as they cannot be in worse circumstances under them, than we have taught them to expect from the king's government." And a little lower he tells us, "that we scruple not to stir up his majesty's subjects against his government, forgetting all duty to our sovereign, and all decency to those in authority under him." These are very heavy charges indeed! But can the governor possibly expect that any body will believe them? Can he even believe them himself? We can indeed truly say it with confidence, and the governor may, if he pleases, call it "our usual confidence," that there is not a more dutiful, loyal, and affectionate people to any prince on earth, than are the people, not only of this colony, but of all the other British colonies in America, to the best of kings, his present majesty; and we cannot therefore forbear to say, that this charge is a virulent calumny, destitute of all truth and probability. But what must we do to please this kind governor, who takes so much pains to render us obnoxious to our sovereign, and odious to our fellow-subjects? Must we bear silently all these abuses? 'tis too hard. But if we deny his accusations, and prove them false, this he calls, "forgetting all decency to our governor;" and if we complain of his treatment, that is, "stirring up his majesty's subjects against his government" No; may it please the governor, we make a wide distinction between the king's government, and the governor's conduct; and we have reason. Every deputy-governor is not the prince, and some are very indifferent representatives of him. Every dislike of a governor's behaviour is not a dislike of government; nor every censure of a governor, disaffection to the king. And indeed the more a people love their prince, and admire his virtues, the less they must esteem a governor who acts unlike him.

That there is a design in the proprietaries and governor, to abridge the people here of their privileges, is no secret. The proprietaries have avowed it in their letter to the house, dated London, March 2, 1741. The doctrine that it is necessary, is publicly taught in their *Brief State;* and the governor himself has told us, that we have more than is suitable for a dependant colony. It is these proceedings that give jealousy to the people, but do not, however, alienate their affections from his majesty's government, though they may from the proprietaries. Their "confidence in the crown" is as great as ever; but when the delegates of power are continually abusing and calumniating the people, it is no wonder if they lose all "confidence" in such delegates.

The governor can think himself at liberty to tell us, that "we stir up his majesty's subjects against his majesty's government, forgetting all duty to our sovereign;" and yet if we only tell him, that the difficulties he meets with, are not owing to those causes, which indeed have no existence, but to his own want of skill and abilities for his station, he takes it extremely amiss, and says, "we forget all decency to those in authority." We are apt to think there is likewise some decency due to the assembly, as a part of the government; and though we have not, like the governor, had a courtly education, but are plain men, and must be very imperfect in our politeness, yet we think we have no chance of improving by his example. Skill and abilities to govern, we apprehend fall to the share of few; they may possibly be acquired by study and practice, but are not infused into a man with his commission; he may without them be a wise and able man in other affairs, and a very good and honest man in general. But those "who stir up his majesty's subjects against his government, and forget all duty to their sovereign," as the governor says we do, must be traitors and rebels, a character, that includes the highest folly with the greatest wickedness. The world will judge which of these charges is most decent, as well as most true, and we shall leave it to their judgment.

The governor is pleased to repeat the charge of our "taking upon us great and mighty powers," and to say, since you call upon me to particularize them, I shall gratify you. We apprehend it is rather to gratify himself; for lest these particulars should seem to be brought in improperly, the governor says, we call upon him for them. We cannot find any such call in our message; but if there were, it was a very unnecessary one; for the governor has so accustomed us to find some of these charges in almost every message, and so delights in renewing them, after repeated refutations, that we might have expected them as matters of course. You have created a paper currency of your own, &c. This stale charge was fully refuted in our message of the seventeenth of May last, and now repeated without taking the least notice of that refutation. You pay your own wages out of the provincial money, when the law requires and provides for their being paid in another manner. This charge is premature, as we have not yet paid ourselves any wages out of any money. We gave the governor, indeed, five hundred pounds out of this provincial money, though the law requires and provides for his being supported by licences of public-houses, fees, &c. but that he might be sure of being right, he took both. The plain state of the matter is this: by the county levy act, the commissioners and assessors are directed "to adjust and settle the sum and sums of money which ought of necessity to be raised yearly, to pay for representatives' service in general assembly, and to defray the charges of building and repairing of court-houses, prisons, work-houses, bridges, and causeways, and for destroying of wolves, &c. and to lay a tax for these purposes." But other acts of assembly having directed that the provincial money, arising from the loan-office and excise, "shall be disposed of as the assembly of this province shall direct and appoint," former assemblies have, for many years past, paid provincial

charges, and the public salaries out of that provincial money, and among others, their own small wages. Hence it happened, that the wages being otherways paid, the commissioners and assessors found no necessity of raising a tax for that purpose, and therefore have not done it, being no more obliged to do it without such necessity, than to tax for building court-houses when they have them already built, or to repair them when they need no repairs; or to pay for wolves' heads when none are killed. As to the other charges of not keeping the borrowers in the loan-office strictly up to their yearly payments as the law required, we beg leave to say, that we cannot think this house is strictly accountable for all the faults of their, any more than the governor for the faults of his, predecessors; nor that every forbearing to execute a law is properly called dispensing with law. If it were, the executive power in most governments is greatly chargeable with the same offence. For our parts, whom the governor is pleased to load with this charge, we did in May last expressly order the trustees to use the utmost of their care and diligence to collect the outstanding quotas, and, to quicken them, drew orders on them nearly for the amount; but as a severe execution of that law would in some cases have been extremely injurious, as this evil had been almost imperceptibly growing, and gradually stole upon the assemblies in a long course of years; and as a sudden sale of all delinquent estates to recover their respective quotas, would have been the ruin of many; and no depreciation of the money or other considerable inconvenience has followed the forbearance, we conceive that former trustees and assemblies, who gained nothing to themselves by this indulgence of the people, though not free from blame, deserve a less severe censure than the governor is disposed to bestow upon them. The charge perhaps amounts to little more than this, that they did not exact from the people the payments that by law they ought to have exacted; which the governor calls dispensing with a law; they are not, however, chargeable with exacting money from the people which by law they had no right to exact, as we apprehend the governor does, in the fees for marriage licences, by which many thousand pounds have been drawn from the inhabitants of this province. If this be not dispensing with law, 'tis making law, and we presume the governor alone has no more right to do the one, than the assembly alone the other. The last of this string of charges, "that we have taken upon us to administer the affirmation to our clerk, and several of our members not quakers" is a total mistake in point of fact. As an assembly, we disclaim any right of administering either an affirmation or an oath; and have never administered an oath or affirmation to our clerk, or any member; but whenever an oath or affirmation is administered in the house, it is done by a justice of the peace. And our members are always qualified according to law.

The governor is pleased to say, "we have often mentioned what we have done to promote the success of his majesty's arms under general Braddock." We own that we have often mentioned this, but we have been forced to it by the governor's asserting as often in his messages, contrary to known fact, that we had done nothing, and would do nothing of that kind. But it seems we take to ourselves the services of particular men, in which, the governor says, we had no hand, and adds, "that had we in time opened the proper roads, raised men, and provided carriages, and necessary provisions for the troops, we might now have been in peaceable possession of fort Duquesne." We beg leave to ask the governor, has the body no share in what is done by its members? has the house no hand in what is done by its committees? has it no hand in what is done by virtue of its own resolves and orders? did we not, many weeks before the troops arrived, vote five thousand pounds for purchasing fresh victuals, and other necessaries for their use? did we not even borrow money on our own credit to purchase those provisions when the governor had rejected our bill? will the governor deny this, when he himself once charged it upon us as a crime? were not the provisions actually purchased by our committee, the full quantity required by the commissary, and carried by land to Virginia at our expense, even before they were wanted? did the army ever want provisions, till they had abandoned or destroyed them? are there not even now some scores of tons of it lying at fort Cumberland and Conegochieg? did the governor ever mention the opening of roads to us before the eighteenth of March, though the requisition was made to him by the quarter-master-general in January? did we not in a few days after send him up a bill to provide for the expense, which he refused? did not the governor proceed nevertheless to appoint commissioners, and engage labourers for opening the road, whom we afterwards agreed to pay out of the money we happened to have in our power? did the work ever stop a moment through any default of ours? was the road ever intended for the march of the troops to the Ohio? was it not merely to open a communication with this province for the more convenient supplying them with provisions when they should be arrived there? did they wait in the least for this road? had they not as many men as they wanted, and many from this province? were they not more numerous than the enemy they went to oppose, even after the general had left near half his army fifty miles behind him? were not all the carriages they demanded, being one hundred and fifty, engaged, equipt, and sent forward in a few days after the demand, and all at Will's creek, many days before the army was ready to march? with what face then, of probability, can the governor undertake to say, "that had we in time opened the proper roads, raised men, and provided carriages, and necessary provisions for the troops, we might now have been in peaceable possession of fort Duquesne?"

The governor is pleased to doubt our having such letters as we mention; we are therefore, in our own vindication, under a necessity of quoting to him some parts of them; and will show him the originals whenever he shall please to require it. The general's secretary, in his letter of the tenth of May to one of our members (who, in pursuance of a resolve of the house for the service of the army, waited on the general at Frederic, and there occasionally undertook the furnishing of wagons, which he performed with the assistance of some other members of the committee, and for that, and other services to the troops, received the thanks of the house at his return) says, "you have done us great service in the execution of the business you have kindly undertaken; and indeed with-

out it, I don't see how the service could have been carried on, as the expectations from Maryland have come to nothing." And again, in his letter of May the fourteenth, "the general orders me to acquaint you that he is greatly obliged to you, for the great care and readiness with which you have executed the business you undertook for him. At your request he will with pleasure discharge the servants that may have enlisted in the forces under his command, or any others for whom you may desire a discharge; and desires that you would for that purpose send him their names." And again, in his letter of May the twentieth, "I have only time to thank you once more, in the name of the general and every body concerned, for the service you have done; which has been conducted throughout with the greatest prudence and most generous spirit for the public service." The general's own letter, dated the twenty-ninth of May, mentions and acknowledges the provisions "given by the Pennsylvanian assembly" [though the governor will allow us to have had "no hand" in it] and says, "your regard for his majesty's service, and assistance to the present expedition, deserve my sincerest thanks," &c. colonel Dunbar writes, in his letter of May the thirteenth, concerning the present of refreshments, and carriage horses sent up for the subalterns, "I am desired by all the gentlemen, whom the committee have been so good as to think of in so genteel a manner, to return them their hearty thanks." And again, on the twenty-first of May, "your kind present is now all arrived, and shall be equally divided to-morrow between sir Peter Halket's subalterns and mine, which I apprehend will be agreeable to the committee's intent. This I have made known to the officers of both regiments, who unanimously desire me to return their generous benefactors their most hearty thanks, to which be pleased to add mine, &c." and sir Peter Halket, in his of the twenty-third of May, says, "The officers of my regiment are most sensible of the favours conferred on the subalterns by your assembly, who have made so well-timed and so handsome a present. At their request and desire I return their thanks, and to the acknowledgments of the officers, beg leave to add mine, which you, I hope, will do me the favour for the whole to offer to the assembly, and to assure them that we shall on every occasion do them the justice due for so seasonable and well judged an act of "generosity." There are more of the same kind, but these may suffice to show, that we had "some hand in what was done," and that we did not, as the governor supposes, deviate from the truth, when, in our just and necessary vindication against his groundless, cruel, and repeated charge, "that we had refused the proper, necessary, and timely assistance to an army sent to protect the colonies," we alleged "that we had supplied that army plentifully with all they asked of us, and more than all, and had letters from the late general and other principal officers, acknowledging our care, and thanking us cordially for our services." If the general ever wrote differently of us to the king's ministers, it must have been while he was under the first impressions given him by the governor to our disadvantage, and before he knew us; and we think with the governor, that if he had lived, he was too honest a man not to have retracted those mistaken accounts of us, and done us ample justice.

The governor concludes with telling us that "if our minutes be examined for fifteen years past, in them will be found more frivolous controversies, unparalleled abuses of governors, and undutifulness to the crown, than in all the rest of his majesty's colonies put together." The minutes are printed, and in many hands, who may judge on examining them whether any abuses of governors and undutifulness to the crown are to be found in them. Controversies, indeed, there are too many; but as our assemblies are yearly changing, while our proprietaries, during that term, have remained the same, and have probably given their governors the same instructions, we must leave others to guess from what root it is most likely that those controversies should continually spring. As to frivolous controversies, we never had so many of them as since our present governor's administration, and all raised by himself; and we may venture to say, that during one year, scarce yet expired, there have been more "unparalleled abuses" of this people, and their representatives in assembly, than in all the years put together, since the settlement of the province.

We are now to take our leave of the governor; and indeed, since he hopes no good from us, nor we from him, 'tis time we should be parted. If our constituents disapprove our conduct, a few days will give them an opportunity of changing us by a new election; and could the governor be as soon and as easily changed, Pennsylvania would, we apprehend, deserve much less the character he gives it, of an unfortunate country.

Extract from the votes of assembly, Sept. 29, 1755.

The speaker read to the house a paper containing some authorities relating to the rights of the commons of Great Britain over money bills, and in support of the bill passed by this house for granting fifty thousand pounds for the king's use, so far as the said bill relates to the taxing the proprietaries' estate within this province: and the speaker being requested by the house to let the same be entered upon the minutes, consented thereto; and it accordingly followed in these words, viz.

THE governor, in his message of the thirteenth of August last, asserts, "That as our proprietaries (being hereditary governors of this province) have no vote in choosing representatives in the assembly, therefore it is not consistent with the British constitution that their estates here should be liable to pay taxes." And in answer to the privilege we claim, of having our bills granting supplies passed as they are tendered, without alterations, the governor in his message of the twenty-fourth instant says, that this claim is not warranted by charter; to which the house very justly replied on the twenty-ninth, that the charter gives us all the powers and privileges of an assembly, according to the rights of the free-born subjects of England, and as is usual in any of the king's plantations in America. If the free-born subjects of England do not exercise this right, and it is not usual in any of the king's plantations in America, then we are in the wrong to claim it, and the governor is in the right in denying it."

The governor in the beginning of his administration has solemnly promised, "that he would upon all occasions be studious to protect the people committed to his charge in all their civil and

religious privileges." So far then, as these privileges belong to the people and their representatives, from known facts and unexceptionable authorities, so far the governor must have failed of his promise in the protection we have a right to from the duty of his station, and our charters, and the laws of this province.

The practice of the other plantations in America, and particularly very late instances of his majesty's colony of New York, on money bills, are against the governor; but I shall choose to confine myself to the rights of the house of commons, to which we are entitled by our provincial charter, confirmed by a law passed in the fourth year of the late queen Anne, for ascertaining the number of members of assembly, &c. which enacts, in the words of the charter, "That the representatives chosen and met according to the directions of that act, shall have power to choose a speaker, and other their officers; and shall be judges of the qualifications and elections of their own members, sit upon their own adjournments, appoint committees, prepare bills in order to pass into laws, impeach criminals, and redress grievances; and shall have all other powers and privileges of assembly according to the rights of the free-born subjects of England, and as is usual in any of the queen's plantations in America." The house of commons then do claim by the law and usage of parliament, the right of determining their own elections, and consequently, and necessarily, the right of the electors to vote; and in virtue of this right it appears by the journals of the house of commons, vol. XIII, p. 326, that no peer of the realm hath any right to give his vote in the election of any member to serve in parliament. The same was again unanimously resolved in the beginning of the sixth and last parliament of king William III., with an additional resolve, "That for any lord of parliament, or any lord lieutenant of any county to concern themselves in the elections of members to serve for the commons in parliament, the same is a high infringment of the liberties and privileges of the commons of England." The same unanimous resolves appear in the first parliament of queen Anne, and in the beginning of every parliament to the ninth of king George, where our journals end. And it is a standing order of the house of commons, "That no peer hath a vote in the election of a commoner:" Nevertheless the commons assert, "That the grant of all aids to the king is by the commons, and that the terms, conditions, limitations, and qualifications of such grants have been made by the commons only." And upon a particular order to a committee, 30 Car. II., that they should prepare and draw up a state of the right of the commons in granting of money, and how those rights might be asserted: the house of commons, upon that report, resolve, "That all aids and supplies, and aids to his majesty in parliament, are the sole gift of the commons; and all bills for the granting such aids and supplies, ought to begin with the commons; and that it is the undoubted and sole right of the commons to direct, limit, and appoint in such bills, the ends, purposes, considerations, conditions, limitations, and qualifications of such grants, which ought not to be changed or altered by the house of lords." The house of commons have been always extremely careful of this valuable right, as upon the bill for an additional duty on coffee, &c. 1st of William and Mary; and the bill for the sale of the forfeited estates in Ireland, and indeed upon all occasions upon money bills.

Upon the bill for appointing commissioners to examine and state the public accounts, "the house of commons were fully sensible, and thought the bill so useful at that time, as could not be sufficiently expressed; yet nothing could be of greater importance to the public than the maintaining the just and distinct rights and privileges which each estate of the kingdom enjoyed according to their constitution; that the lords had many high privileges to recommend their lordships to the favour of their prince, and to support their figure in the government, but the commons had little besides that one of giving money and granting aids, which was their undoubted and inherent right, and therefore every thing that intrenched upon that the commons might be allowed to be extremely jealous of."

As it would be dangerous to proceed in the subject now before us without authorities, I shall add the continuation of Rapin's History of England, by Tindal, vol. iii. page 231, and the record relating to the same controversy between the houses of lords and commons, as it lies upon the journals of the commons in the fourth session of king William's second parliament.

Tindal says, that the lords added a clause to the money bill sent up by the commons, by which they taxed themselves. That clause was disagreed to by the commons, *nemine contradicente*, as an encroachment on their rights in the article of giving money, and sent to the lords to desire a conference thereupon; to whom they represented, "That the commons had disagreed to the clause added by their lordships to the money bill, as being a notorious encroachment upon the rights of the house of commons to order and settle all matters relating to the giving of money, which their ancestors had been so jealous of; that they thought it a diminution of this their fundamental privilege to give their lordships any reason for supporting it; and their lordships, after a long debate, resolved to recede from the said clause by so great a majority, that the house did not divide upon it—and so dropped the clause.

On the journals of the house of commons it appears, That the lords had agreed to the bill, entitled, "An act for granting to their majesties an aid of four shillings in the pound, &c. with an amendment. Provided, nevertheless, that all and every the peers that are to be rated by virtue of this act, for their offices or personal estate, shall be rated by Thomas earl of Pembroke, lord privy seal, George marquis of Halifax, William earl of Devon, lord steward of the household, Charles earl of Shewsbury, &c. &c. or any five of them, and not otherwise; and shall not be subjected to the imprisonment of his or their persons, any thing in this act contained to the contrary notwithstanding. Provided also, and it is hereby declared, that the several rates and taxes to which the lords and peers of this realm shall be liable, by virtue of this act, shall be received by a collector to be nominated by the peers; which said collectors shall cause the same to be paid into his majesty's receipt of of exchequer, on or before the twenty-fifth day of March, 1693." And the question being put, that the house do agree with the lords in the said amendment, it passed in the negative. And, by order of the house, sir Thomas Clarges reported the reasons to be offered at a conference with the

lords, "That the right of granting supplies to the crown is in the commons alone as an essential part of their constitution, and the limitation of all such grants, as to the matter, manner, measure, and time, is only in them, which is so well known to be fundamentally settled in them, that to give reasons for it, has been esteemed by our ancestors to be a weakening of that right, and the clause sent down by their lordships was a manifest violation thereof;" and an amendment being proposed to leave out "violation," and insert "invasion" instead thereof, the same was, upon the question put thereupon, agreed unto by the house.

And after several conferences, Mr. attorney-general reported, "that their lordships did not insist upon their provisos." [See editor's note at the end of this article.]

From these records and other authorities, as well as known facts, I apprehend it clearly appears, that the lords do not vote in the election of a commoner to serve in parliament, nor intermeddle therein. And that the house of commons have a right in money bills, that they are to be assented to or rejected by the lords without alterations or amendments, I will now add such other acts and authorities as may further show, that the king's fee-farm rents, the palaces of Saint James's, Whitehall, Somerset-house, &c. and the regalities of Wales and Chester, and even the civil list revenue, are, and have been occasionally subjected to be charged by acts of parliament for the public uses.

It is well known, that before the revolution the whole standing income of the state was in the power and disposal of the crown; and was called the revenue of the crown; there was then no distinction of what was to be allotted to the king's use, and what for the service of the public, by which means the king might reserve what part he thought fit for his own designs, and employ no more than he pleased for the purposes of the nation; accordingly it was found, after the restoration, the public revenue had been constantly embezzled, and immense sums very often sunk without being applied to the uses for which they were granted; it was therefore wisely concerted, after the revolution, for the security of the nation from perpetual misapplications of the public money, to allot a separate income for the maintenance of the king's household, and the support of his dignity, which is now called the civil list, and to put the rest of the public revenues entirely under the command of the parliament.

It was not till the ninth and tenth of William III., that the civil list was settled upon the king for life, though he had earnestly desired it, and had subjected that revenue to be charged to the uses of the war. And on the opening of the third sessions of the third parliament, when they did settle it upon him during his majesty's life, the king tells them, "that the revenues of the crown had been so anticipated by his consent for public uses, that he was wholly destitute of means to support the civil list:" Nevertheless, by an act of the twelfth and thirteenth William III., three thousand seven hundred pounds a week (as the necessity of the public affairs required it) was taken out of that revenue "to be applied and disposed of to and for the public uses during his majesty's life." By an act granting an aid to her majesty by a land-tax, passed in the first year of the reign of queen Anne, for carrying on the war against France, the receivers of the chief rents of her majesty, and of the queen dowager, and the receivers of any persons claiming under the crown were enjoined under severe penalties to deduct their taxes four shillings in the pound out of the said rents, and in like manner the fee-farm rents of the crown, the palaces of St. James's, Whitehall, Windsor-castle, and Somerset-house, &c. are subjected to the land-tax through all the succeeding acts of parliament. By an act of the first of king George, entitled, An act to enable his majesty to grant the regalities of North-Wales, South-Wales, and county of Chester, to his royal highness the prince of Wales, &c. it is enacted, "that it shall and may be lawful for the king's most excellent majesty, by letters patent, &c. to give and grant unto his said royal highness all the said honours, castles, &c. within the counties of Flint, Denby, Montgomery, Carnarvon, &c. and the county palatine of Chester, and every or any of them, which do not belong to his majesty, his heirs and successors, &c. so nevertheless that the same do not extend to any taxes, aids, or revenues whatsoever granted or to be granted to the crown by parliament, to or for any public use or uses whatsoever; to have and to hold the said honours, castles, lordships, manors, messuages, lands, tythes, tenements, rents, hereditaments, possessions, and premises, so to be granted as aforesaid unto him the said prince, and his heirs, kings of Great Britain; subject, nevertheless, to such annual and other payments and incumbrances as are legally charged thereupon, or usually satisfied out of the revenues of the same." And upon a computation of the revenues of the late prince of Wales, in the year 1736, when the land-tax was at two shillings in the pound, the deductions were five thousand pounds a year for the land tax upon fifty thousand pounds, the six-penny duty to the civil list, and the fees payable at the exchequer, about two thousand pounds more; so that his nett revenue on the fifty thousand pounds a year, allowed him by the king, would not amount to more than forty-three thousand pounds yearly, besides his dutchy of Cornwall. By this estimate we see the royal family, for what they received out of the civil list, were subject to parliamentary taxes, until it was otherwise provided by particular acts; and indeed by the seventh and eighth of William III., chap. 17. sect. 12, it is enacted, "That no letters patents, granted by the king's majesty, or any of his royal predecessors, &c. shall be construed or taken to exempt any person, city, borough, &c. or any of the inhabitants of the same, from the burden and charge of any sum or sums of money granted by the act; and all *non obstantes*, in such letter patent made, or to be made, in bar of any act of parliament for the supply or assistance of his majesty, are declared to be void, and of none effect." If upon these, and many other authorities which might be adduced to the same purpose, it should appear, that the revenues of the crown, and of the royal family, are, and have been, subjected to the national taxes of Great Britain, as well as the estates of all the peers and commoners of our mother-country, from whence we derive ourselves and our constitution, it will be difficult to conceive any good reasons why our proprietaries, and their great estate in this province, should alone, of all his majesty's subjects, be exempted from the payment of taxes for the defence and security of their own estates. But our governor is pleased to inform us, that if we tax them at all, it must be as proprietaries

and chief governors, which is the only capacity by which they are connected with, or related to, the inhabitants; that they hold the government and soil under the same grant, and their title to both is entered in their persons, and cannot be separated, without destroying their authority. Now we certainly have other connexions with Thomas Penn, and with Richard Penn, besides their being chief governors: and I suppose they may separately eject or commence actions at law for rent, or other actions, in his majesty's courts within this province, in their private capacity, in the same manner that other inhabitants and freeholders could do in like cases; and the powers of government might have descended through the eldest branches of the family, or either of our proprietaries, without injuring their property in the soil; and in this case, the governor would have been sufficiently authorized by commission under him, in whom the powers of government were vested. But the commission of property (which our governors have not been concerned with till very lately) would have been insufficient, unless executed by all who had a property in the lands, and is now executed by the governor by virtue of that commission in opposition to his commission as lieutenant-governor, which expressly enjoins him not to grant lands, or otherwise interfere with the proprietaries' affairs of property.

But to return, as it is evident that the peers of Great Britain do not vote in the election of members to serve in parliament, yet their estates are taxed by bills of aids, and supplies to the crown, which arise out of the house of commons; I am of opinion, that the conclusion the governor draws from his reasoning in the message of the thirteenth of August last, is in direct opposition to the rights and usage of the house of commons; and consequently our offering a bill, whereby the proprietary estate was to be taxed with all other estates within this province, was not against the very principles of the British constitution, as he would imagine.

Have the proprietaries, says the governor, a right to vote in the election of representatives as landholders? surely not. Being hereditary governors of the province, and having a vote in the legislature by their own particular representative the governor. How then came you by a right to tax them as fellow-subjects and landholders, seeing they had no voice in choosing you, nor were entitled to any, though owners of land in every country.

To which it may be answered:

Have the peers of Great Britain a right to vote in the election of representatives as landholders? surely not. Being hereditary peers of Great Britain, and having a vote in the legislature by their own particular representation in the house of lords. How then came the house of commons by a right to tax the peers as fellow-subjects and landholders, seeing they had no voice in choosing them, nor were entitled to any, though owners of land in every country,

From the very principles therefore (says the governor) of the British constitution, you have no right to tax them as freeholders, or fellow-subjects. But all this kind of reasoning serves only to ease us from the whole force of it, and leaves the governor to dispute the principles of the British constitution with a British house of commons, before whom he will undoubtedly think it his duty to produce stronger arguments than these. The fallacy of this manner of reasoning is very obvious.

The knights, citizens, and burgesses, represent the whole commons of England; but the peers are present in parliament for themselves only; as it would be unjust to tax the peers if they had no representation in the legislature, by which they might give their consent; so it would be equally unjust to tax the proprietary estate here, without his assent by his representative the governor.

The peers and our proprietaries have their negatives upon all bills; but the equity of taxing themselves, as well as all others, for their common safety and defence, induces the lords to give their assent to bills offered to them for that purpose; and no doubt the same equity ought to be equally binding on our proprietaries; and it may be hoped, that all restrictions, by which their deputy is disabled from discharging his duty, will, in due time, be considered by our superiors. Our proprietaries, I presume, have no right to vote for our representatives, though they are certainly landholders in this province; and under this consideration they are exempted from paying assemblymen's wages by our country rate and levy act. The peers of Great Britain are as certainly landholders, and many of them burgesses and members of corporations; yet they neither vote for the knights of the shire or burgesses; and under the same consideration are exempted from contributing to their expenses. The commons petitioned in parliament, first of Richard II., that all persons having lay fee might contribute to the charge of the knights. The king answered, that the lords of the realm would not lose their old liberties: yet in the same reign, by the twelfth of Richard II., chap. 2, it is enacted, that if any lord, or any other man, spiritual or temporal, hath purchased any lands or tenements, or other possessions, that were wont to be contributory to such expenses before the time of the said purchase, that the said lands, tenements, and possessions, and the tenants of the same, be contributory to the said expenses, as the said lands, tenements, and possessions were wont to be before the time of the same purchase. This law, which had continued through so many ages, appears to be founded in justice and equity, and will necessarily become the rule of our conduct; for as our paper money acts are near expiring, and it may be hoped that no future assembly will give up their just rights for the obtaining of new emissions, whatever inconveniencies they may labour under for want of them, the payment of assemblymen's wages must become very burdensome if they are to be kept sitting, though to little or no purpose (as of late) through a great part of the year; and especially if our proprietaries, against our expectations, should have as much power as they have inclination to get their increasing estates exempted from bearing any share of our taxes; for in this case we have reason to apprehend they may judge it their private interest to impoverish the people by exorbitant impositions, or a profusion of the public money; and as under these circumstances pretences will never be wanting, new and grievous burdens will be repeatedly called for, till by degrees the freeholds and possessions of this young colony must insensibly fall into the proprietaries' hands; and thus by the continual proprietary exemptions, and the weight becoming still heavier upon the decreasing number who may be able, for a while, to bear up, and continue among the cala-

mities of their country; these too must at length submit and leave the colony their predecessors had cultivated and settled with honour under a milder administration.

NOTE.—The editor takes the liberty of adding in this note the following authorities.

The commons in 1700 having tacked or consolidated the land-tax and Irish-forfeiture bills, and the lords having returned the same with certain amendments, the commons rejected the said amendments for the following reasons, viz. "for that all aids and supplies granted to his majesty in parliament, are the sole and entire gift of the commons; and as all bills for the granting such aids and supplies begin with the commons, so it is the undoubted and sole right of the commons to direct, limit, and appoint in such bills, the ends and purposes, considerations, limitations, and qualifications of such grants; which ought not to be changed or altered by your lordships. This is well known to be such a fundamental right of the commons, that to give reasons for it has been esteemed by our ancestors to be a weakening of that right," &c., and though the lords at a farther conference strenuously contended for their said amendments, in opposition to these reasons; the commons adhered, and left the bill with their lordships, to adopt in the gross, or reject as they thought fit. After which the reader need not be told what was the issue.

Extract from the report of a free conference between the two houses, Feb. 13. 1702-3.

"That the ancient manner of giving aids was by indenture, to which conditions were sometimes annexed; the lords only gave their consent, without making any alteration; and this was the continued practice, until the latter end of Henry the fifth, and, in some instances, until Henry the seventh. That in the famous record, called the indemnity of the lords and commons settled by the king, lords, and commons, on a most solemn debate in 9 Henry IV., it is declared, that all grants and aids are made by the commons, and only assented to by the lords. That the modern practice is, to omit the lords out of the granting, and name them parties only to the enacting clause of aids granted to the crown; to which their lordships have always concurred, and on conferences departed from their attempts of petty alterations in acts relating thereunto. That if then all aids be by the grant of the commons, it follows that the limitation, disposition, and manner of account, must likewise belong only to them."

Report of a committee of the assembly, September 23.

In obedience to the order of the house, we have considered the proprietaries' eleventh, twelfth, and twenty-first instructions, relating to money bills, and now offer such remarks thereon as occur to us.

THE preamble to the eleventh instruction sets forth, "That the interest money arising from the loan of bills of credit in this province, was intended by the proprietaries, and the house of representatives, to be applied for the public service of the province, and of the inhabitants thereof, and should therefore, under the direction of the same power that raises it, be most carefully applied to those purposes, as a greater security to the people against misapplications, than if it was intrusted only to one branch of the legislature; and such was the ancient practice in their said province." That the interest money was intended to be applied for the public service of the province, and of the inhabitants thereof, is undoubtedly right; but that it was ever the "practice," or that there was ever even a single instance of the proprietaries or their deputies having a vote in the application of the interest money, we must absolutely deny. Their consent to the disposition is not required in any of our loan acts from the beginning to this day, the constant tenor of those laws being, that the "interest money shall be disposed of as the assembly of this province shall from time to time order and direct." Their consent was never asked, unless in the acceptance of presents made them out of that interest, which could not be forced on them without their consent; and that kind of application they have indeed been graciously pleased to consent to from time to time, to the amount of above thirty thousand pounds given to themselves out of that fund and the excise. If this was a misapplication, and we know of no other, the power they contend for would not have prevented it; for it is scarce probable they should ever disapprove or refuse to sign acts, votes, or resolves, which they thought so just and reasonable.

And indeed, had these presents been always as regular as the seasons; and never intermitted, be the conduct of the governor ever so inconsistent with the public good, your committee have reason to believe, this new instruction had never been formed or thought of. But since the representatives of the people have dared to signify their disapprobation of a governor's measures, by withholding those tokens of their esteem, affection, and gratitude, which were constantly given when they found themselves well governed; this instruction is thought necessary to be enforced. Not for the greater security of the people against misapplication; for they never complained of any; but to compel your continuance of those presents; to compel an addition to them, for they are thought too small; and to compel the payment of what they are pleased to call the arrears of such presents to any governors from whom they have at any time been withheld. For if the people's money cannot be disposed of for their own benefit, without the proprietary or his deputy's consent, the passage of the bill, or the approbation of the resolve, must be facilitated, as the proprietaries were pleased to tell us on a former occasion, by a regard to their interest, that is by putting at the same time into their private pockets whatever share of the public money they shall be pleased to insist on, under the specious name of salary or support; though by the quit-rents, and even by their other fees and perquisites, established by law or taken by custom, they have already a support much more than sufficient.

The money arising by the interest of the bills of credit, as well as that arising by the excise, is paid wholly by the people. To dispose of their own money, by themselves or their representatives, is, in our opinion, a natural right, inherent in every man or body of men, antecedent to all laws. The proprietaries pay no part of this money, and therefore can have no right to a share in the power of disposing of it. They might as reasonably claim a right to a negative in the disposition of every man's private fortune, and for the same reasons, to wit, the man's greater secu-

rity, and to prevent misapplication; nay, the reasons would be stronger, bodies of men not being generally so apt to misapply their money, as single prodigals. The people have never complained that any such misapplication has been made by their representatives; on the contrary, they have shown their approbation of the conduct of the assembly in this tender point, by long repeated annual elections of the same men to the same trust in the same office. They have always seen their money disposed of, from time to time, for the advantage and honour of the public, or for the king's immediate service, and they had reason to be contented with the disposition. The public credit has been constantly preserved, and every man who served the government, has been always duly and readily paid; but if this new-claimed negative in the proprietaries takes place, the people will not have it in their power to reward the man that serves them, or even to pay the hire of the labourer that works for them, without the governor's leave first purchased; much less will they be allowed to support an agent in England to defend their rights, or be able to pay the expense of prosecuting their complaints when oppressed. And to prevent their doing this, we conceive, another main view of this instruction.

In short, it does not appear to your committee that this extraordinary instance of the proprietary's care of the people's money, to prevent its being wasted by their own representatives, was for the people at all necessary. Those representatives themselves are a part of the people, and must bear a share of their burdens. For their own sakes, therefore, as well as to recommend themselves to the esteem and regard of their constituents, it is highly probable they will execute that trust, as they always have done, with justice, prudence, and frugality; with freedom to the king's service, and grateful generosity to governors that sincerely seek their welfare, and do not join with the proprietaries to oppress them. But this instruction might perhaps be necessary to extort those grants to governors which they had been pleased to style salary, and render that certain, which before depended on the good-will of the people; for how else can the proprietaries be sure of that share of those grants, which, by their private contracts sometimes made with their governors, is (if report says true) to be paid to themselves?

The proprietaries are, however, willing to permit the renewal of the eighty thousand pounds, which is now to sink in a few years, and even the adding forty thousand pounds more, the whole to be emitted on loan, provided, that the eleventh instruction be complied with, "and half the power of applying the interest reserved to them; and provided, that all rents and quit-rents due, or to be due or payable to them, be always paid according to the rate of exchange at the times of payment between Philadelphia and London, or some other sufficient provision enacted in lieu thereof, as was done by a former act." Your committee cannot help observing here, that the proprietaries' tenderness for their own interest appears in this instruction much stronger than their care for that of the people. Very great emoluments arise to them by emissions of paper-money on loan, and the interest money is a tax they are clear of. They are therefore willing the quantity should be increased; but whatever advantages they receive from it, they are resolved to suffer no disadvantage from any occasional depreciation; for they will always be paid their rents and quit-rents, according to the rate of exchange between Philadelphia and London. By the original agreements, those rents and quit-rents were to be paid in sterling money (or the value in coin current) to the proprietary receivers in the province. A bill of exchange besides the sterling sum conveyed, includes all the freight, risk, and expense of conveying that sum in specie to London. Now we conceive the people are not, nor can in justice or reason be, obliged to transmit their rents to London, and pay them there to the proprietaries. If the proprietaries should think fit to remove to China, they might as justly add to their demand the rate of exchange between London and Canton; this therefore is extortion, and ought never to be allowed in any future act, nor any equivalent made for it. For had that equivalent been really given as a matter of justice, and not extorted as purchase money for the law, it would have been extended to the rents of private landlords, as well as those of the proprietaries. Besides, the great sums to be yearly remitted to them in London, for which no returns come back to the country, naturally tend to raise the exchange; and even put it in the power of their agents to raise it occasionally, just before the periodical times of payment (to the great injury of the people) and to lower it again at their pleasure; a dangerous power this, if no inconvenience can arise to themselves by the rise of exchange! the depreciation of money in every country where it happens, is a common calamity. The proprietary estate ought not to be exempt from it, at the expense of all other estates. There are many fixed ground rents, and other rents arising in the province belonging to the people, and due to private estates. These rents have as much right to be considered, and their deficiency, in case of depreciation, provided for out of the public funds, as those of the proprietaries. But of these they take no care, so their own are secured. It appears however to your committee, that all rents in the country ought to be on the same footing, with regard to any loss by the depreciation of its currency, since that is less likely ever to happen which it is the interest of all to prevent.

Your committee now come to the twenty-first instruction, by the preamble of which it is insinuated, as if acts for provincial taxes had been common in this province, and that the proprietary's estate had been always exempted in such acts; whereas the truth is that there never were but two or three, and those in the early times of the province, when the proprietary's circumstances were low, his affairs incumbered, and the quit-rents so small, as to be insufficient for his support, and therefore they were not only exempted from any part of such tax, but duties and license fees were granted to help them out. For more than forty years, as the excise and interest money have been sufficient for support of government, no provincial taxes have been levied (in this very instruction, a little lower, they themselves acknowledge none have been raised in their time) and the proprietary estate has vastly increased; those license fees are also vastly increased, and yet they still received them. But that their estate should now be exempt from provincial taxes, raised for the defence of that very estate, appears to us extremely unreasonable. During the distress of the family, there was likewise a voluntary subscrip-

tion among the people to pay the proprietary's passage to England; they may from thence as justly claim a right of having their expenses borne by the public whenever they cross the seas. But when those aids were granted to the old proprietary, he had a much better claim to them than his sons; for he undertook to act as an agent and advocate for his people, in England; to defend and secure their rights and privileges; not like his successors, to abolish and destroy them.*

The instruction farther says, that "since the expiration of those former laws, no aid hath ever been granted by the assembly to them as proprietaries. As proprietaries, what right have they to aids? are they not hereditary governors of the province? and while they have indulged themselves with an almost constant residence in England, remote from their country, and greatly to its inconvenience and prejudice, have not the assemblies constantly supported their deputy, sent by the proprietaries to do what they ought themselves to have done in person; though he was often an imperfect deputy, restrained in those powers which should always subsist and be present in every government for the common welfare? but they are pleased to say, "they have voluntarily and cheerfully expended several considerable sums of their own money for the advancement of the province." This they said likewise to a former assembly, and the answer was, "We are unacquainted with these expenses; let the accounts be laid before us, and whatever expense appears to have been made for the service of the province shall be allowed, and repaid with thanks." Those accounts have never yet appeared; and till they do, we think they ought not to be made the foundation of any claim whatever.

They say farther, "that they had no reason to suspect that the assembly would deviate so much from the former usage, as to pretend, by any act of theirs, to charge the proprietary estate in the province with the burden of any taxes." Amazing! if the assembly deviated from the former usage, by taxing their own estates, and those of their constituents (their usual funds failing) why should they not deviate in the same manner in taxing the proprietary estate? and what are the particular merits of this family, that when the whole British nation, when every estate in the kingdom, as well as in this province, is taxed, towards the recovery and defence of their estate in Pennsylvania, that very estate alone should be exempted, and they so confident of its right to an exemption, as to have no reason to suspect the assembly would attempt to tax it?

But it seems "the assembly have represented them in an untrue light, as if unwilling to assist the public, by contributing towards the defence of the country, though no application had ever once been made to them for that purpose." How far they are placed in an untrue light on this account, will, we presume, appear before we finish this report. It appears too, by a report of a former committee. They likewise say, "no application was ever once made to them for their assistance towards the defence of the country." Heretofore it was thought that the country was best defended by maintaining peace and a good understanding with the Indians. This was done from year to year by expensive and repeated presents. The proprietary reaped great advantages from this good understanding and these presents, in his bargains with the Indians for lands. The expenses grew yearly more and more heavy, and repeated humble applications were made to the proprietaries, that they would be pleased to bear a part, but without success. They vouchsafe indeed an answer to the last application, but it was to reject it with the utmost pride and scorn, claiming an inherent right of exemption of their estates from all public charges whatsoever, in virtue of their being governors as well as proprietaries. And the sixty thousand pounds bill is called an attempt of the assembly by "an act of theirs," to charge the proprietary estate, as if they had presumed to do it alone by their own authority. The assembly could not possibly think of taxing the proprietary estate, without the consent of the proprietaries by their deputy; the bill was therefore another humble application to the proprietaries for their consent to a thing so reasonable; and the very style of it was, "we pray that it may be enacted." But that prayer could not be granted, though the province was on the brink of ruin. And yet it seems the proprietaries were not "unwilling;" though their deputy declared they had expressly restrained him even by the words of his commission! the bill however is stigmatized with the characters of "most unjust and extraordinary." Thus it is, when men judge in their own cases. These gentlemen think it unjust to tax their estates, though all the world thinks otherwise. As provincial taxes had not been usual, it might be so far extraordinary, but the mode of taxation was by no means extraordinary, being the same with that of raising our county rates and levies, long used and approved by the province. And the taxing of proprietary lands is used both in New Jersey and Maryland; and located unimproved lands have formerly been taxed in this province. Had such been taxed every where from the first settlement of America, we conceive it would have tended to the increase of the inhabitants, and the greater strength of the colonies; for then such immense quantities of land would not have been monopolized and lain dormant, but people would more easily have obtained settlements, and been seated closer together.

But the proprietaries would have it understood, that it is not for their own sake only, that they object to the fifty thousand pounds bill which was refused, or the sixty thousand pounds act that passed. They are tenderly concerned for the estates of others. No part of the lands of a delinquent, who refuses or neglects to pay his tax ought in their opinion, to be sold for payment; though lands in America are by act of parliament made liable to be sold for discharge of debts, and were almost always so here by the law of this province. If lands, or parts of land may be sold to satisfy private, why not public debts? and though it be unusual in England, it has long been the practice, as we are informed, in several of the colonies, particularly in New England. But they say, "a tax of one shilling in the pound, on the whole value, is what never was laid, nor can possibly be paid, in any country." Strange! may not a country in imminent danger give a twentieth part of their estates to save the other nine-

* This he executed in several instances, and particularly in his answer to the lords of trade's objections to the act of privileges to a freeman, in the year 1705; in which he informed their lordships, that the act was agreeable to the great charter which all Englishmen were entitled to; and that "we went not so far (i. e. from England to America) to lose a tittle of it."

teen? is it impossible even to give a half or three fourths, to save the other half or quarter? may they not even give nineteen parts to save the twentieth? the proprietary's gift of five thousand pounds, they afterwards say, is twenty times more than their tax, if fairly and equally assessed, could by that bill have amounted to. If so, it is possible to give the whole twenty parts; but it has always been understood, that estates are not to be taxed to the full value they might singly sell for. In the same bill it was provided, that located unimproved lands should not be valued in the rates at more that fifteen pounds per hundred acres; when it is well known, that the proprietary's lowest price for wild lands on the frontiers is fifteen pounds ten shillings per hundred; and that the located unimproved lands in their manors, are, some of them, valued at three or four hundred pounds per hundred; they may therefore well say, that "if that tax had been fully assessed, it must have amounted to many times the sum;" but then their next assertion is somewhat inconsistent, viz. that the bill laying this tax was "most unjustly calculated for the purpose of putting it in the power of the assessors to tax the proprietary estates up to the full value, and to ease other persons, by taxing them so lightly as only to make up the residue of the fifty thousand pounds, in which case, much the greatest part of the burden might have been laid on the proprietary estates alone." The value of the proprietary estate has long, for prudential reasons, been kept a profound secret; and the proprietaries have lately given five thousand pounds rather than submit it to the inquiry of the assessors. But your committee conceive some light may be obtained on that head, from this part of the instruction compared with the fifty thousand pounds bill. By that bill their wild, unsurveyed, or unlocated lands, which are many millions of acres, were not to be taxed at all, though they never sell any of them for less than fifteen pounds ten shillings per hundred acres. Their taxable estate consists chiefly in located (though uncultivated) tracts and manors, and in the reserved quit-rents arising from the lands they have sold. These manors and tracts are generally choice, being of the best lands, picked out of every new purchase from the Indians by their surveyors, before the office is opened, and laid by for a market, not to be disposed of till all the surrounding lands are sold and settled. This has increased their value prodigiously, so that they are now, one with another, valued at more than three hundred pounds per hundred; yet by the bill, they were not to be taxed as worth more than fifteen pounds per hundred. And they own, that by the same bill, "their quit rents were to be taxed in the same manner as other estates," consequently as great an abatement to be made in the valuation. And yet by this same bill, under this very moderate valuation of their estate, they say, it would have been in the power of the assessors to have laid much the greatest part of the burden on their estates alone. Now much the greatest part of fifty thousand pounds may be forty thousand pounds, but we will say (for moderation's sake) it is only thirty thousand pounds, and that sum might have been raised by that bill, on the proprietary estates, in two years, by a tax of one shilling in the pound, i. e. fifteen thousand pounds per annum. The shillings in fifteen thousand pounds are three hundred thousand, consequently their estates at that low valuation are worth three hundred thousand pounds. But if you multiply that valuation by 20, to bring it nearer the truth, those estates must amount to six millions; exclusive of their wild lands as aforesaid. If this computation be too high, they may be able hereafter to show its mistakes. At present we conceive the consequences fairly drawn from facts and their own premises. And yet this their enormous estate is, by their instructions to be exempted, while all their fellow-subjects groan under the weight of taxes for its defence! it being the first attacked in the present war, and part of it on the Ohio, the prize contended for by the enemy. For though they, towards the end of this instruction, pretend to be "most ready and willing to bear a just proportion along with their tenants in any necessary tax for the defence of the province," yet this appears clearly to be a mere pretence, since they absolutely except their quit-rents, and their located unimproved lands, their fines, and the purchase monies they have at interest; that is, in a manner, their whole estate, as your committee know of little they have left to be taxed, but a ferry-house or two, a kitchen and a dog-kennel.

But unimproved lands should not, in our proprietaries' opinion, pay any taxes, because "they yield no annual profit." This may deceive people in England (where the value of land is much at a stay) as they are unacquainted with the nature of landed estates in growing plantations. Here new lands, without cultivation, without fencing, or so much as cutting down a tree, being reserved and laid by for a market till the surrounding lands are settled, improve much more in yearly value even than money at interest upon interest. Thirty years ago, the best and richest lands near the proprietary's Conestogo manor were worth and sold for about forty pounds per hundred acres. That manor was then laid out and reserved, containing near seventeen thousand acres; and now the lands of that very manor, which, though so long located, have never yet been cultivated, will sell for three hundred and fifty pounds per hundred acres; which is near nine for one, or eight hundred per cent. Advance! can a state thus producing twenty-five per cent. per annum on the prime cost, be, with any propriety, called "an estate yielding no annual profit?" is it not a well known practice in the colonies, to lay out great sums of ready money for lands, without the least intent of cultivation, but merely to sell them again hereafter? would people follow this practice if they could not make more profit of their money in that way than by employing it in improvement of land, in trade, or in putting it to interest, though interest in the plantations is from six to ten per centum. Does not such land, though otherwise unimproved, improve continually in its value? how mean and unjust is it then, in these gentlemen to attempt to conceal the advantages of this kind of estate, and screen it from taxes, by lurking under the ambiguous and deceitful terms of unimproved lands, and lands yielding no annual profit!

Meanly unjust, indeed, in this instance, do they appear to your committee; who cannot but observe, that the proprietaries, knowing their own inclinations to screen their own estates, and load those of the people, from thence suspected the people might be equally unjust, and intend, by the fifty thousand pounds bill, to ease their estates and load those of the proprietaries. "The bill, say they, appears to us to be most unjustly cal-

culated, for the purpose of putting it in the power of persons, wholly chosen by the people, to tax our estates up to the full value therein mentioned, and to ease other persons by taxing them so lightly, as only to make up the residue that might be wanted to complete the fifty thousand pounds. In which case the persons chosen by the people might have laid by much the greatest part of the burden upon our estates alone." Had they intended to raise much the greatest part of the tax of fifty thousand pounds on the proprietaries' estate, would the house so readily have accepted of five thousand pounds in lieu of their share of that tax? but why this suspicion of the assembly? What instance of injustice can the proprietaries charge them with, that could give ground for such a supposition? if they were capable of such an intention, and an endeavour to get iniquity established by a law, must they not be the most unjust and dishonest of men? the assessors, it is true, are chosen by the people; they always were so by our laws; and let a man's estate be ever so great, he has but one vote in the choice of them; but have the proprietaries no friends in their province? what is become of all their dependants and expectants; those in place, or hoping for places; the thousands in their debt; the mortgagers at their mercy? will none of these, out of love, or hope, or fear, vote for honest assessors, that may take care the proprietary is not oppressed by the weight of an unjust tax? could the assembly be certain, that the whole people were so wicked, as to join in choosing and trusting sets of dishonest assessors, merely to wrong the proprietary? are there no laws in the province against perjury; are not the assessors by law to be sworn or affirmed to assess themselves and all others impartially; and have they not always been chosen as men of note for probity and justice? what a dark prospect must a man's own heart afford him, when he can from thence form such ideas of the hearts of a whole people! a people famous throughout the world, for the justice and equity of their laws, the purity of their manners, their humanity and hospitality to strangers, their affection to their late honoured proprietary, their faithfulness in their manufactures and produce, and uprightness in all their dealings! and to whose virtue and industry these very gentlemen owe all their present greatness!

The proprietaries are pleased farther to say, "that the laying taxes on the real value of the fee-simple, and the sale of land for the payment of taxes, are contrary to the laws and statutes of Great Britain." Your committee cannot find that any laws or statutes were ever made in Great Britain to regulate the mode of laying taxes in the plantations; and if there are none such, our bill could not be contrary to what never existed. In Virginia the taxes are laid on slaves, and paid in tobacco; and every colony has its own mode of taxation, suited to its own circumstances, almost all different from each other as well as from that used in England. But different from, and contrary to, we conceive to be distinct and different things; otherwise many of our laws, even those which have been approved at home, and received the royal assent, are contrary to the laws of England. But as we said before, the laws of England themselves, make lands liable to pay debts in the colonies; and therefore to sell them, or a part of them, to pay public debts, is not contrary to, but conformable with, the laws of England.

But the proprietaries "cannot find that the quit-rents reserved to the crown, in any of the other American colonies, have ever been taxed towards the raising any supplies granted in those colonies; and indeed those quit-rents are generally so small (meaning the king's quite-rents, we suppose, for their own surely are large enough) that little or no land tax, would be due or payable on them, if arising in Great Britain, &c." If your committee are rightly informed, the king's quit-rents in the other colonies, are applied to public purposes, generally for the service of the colony that raises them. When our proprietaries shall think fit to apply those arising here in the same manner, we believe no assembly will attempt to tax them. The smallness of the parts, we cannot conceive to be a good reason for not taxing the whole. Where every man worth less than twenty shillings a year is exempt from taxes, he who enjoys a thousand a year might, as well as our proprietaries, plead to be excused, for that his income is only twenty thousand shillings, each of which shillings is far within the sum exempted by law. In the whole, though what arises from each estate be no great sum, their quit-rents must amount to a very great revenue; and their speaking of them in the diminutive terms of very small quit-rents or acknowledgments, is only to amuse and deceive. They are property; and property should pay for its own preservation. They ought therefore to be taxed to the defence of the country. The proprietaries indeed say, a land-tax was unnecessary, as there are many other ways of raising money. They would doubtless choose any way in which their estate could not be included. But what are those many other ways? Britain, an independent state, can lay infinite duties, on all foreign wares, and imported luxuries. We are suffered little foreign trade, and almost all our superfluities are sent us from Britain itself. Will she permit us to discourage their importation by heavy imposts? or to raise funds by taxing her manufactures? a variety of excises and duties serve only to multiply offices and officers, and to make a part of the people pay for another part who do not choose to pay. No excise or duty, was ever a fair and equal tax on property. The fairest, as the proprietaries themselves have acknowledged, is a poundage on all real and personal estate, according to its value.

We are now to hear of the generosity of the proprietaries, who, as they say, "were so far from desiring not to contribute to the defence and support of his majesty's rights and dominions, that immediately on the first notice of the defeat of general Braddock, they had sent over an order upon their receiver-general, to pay five thousand pounds as a free gift towards the defence of the said province." We may presume to ask, why, when they knew the assemblies were continually worried to give money, and the bills in which it was offered as constantly rejected; why did they not unmanacle their governor, and at the same time set an example of zeal for the common cause by a generous gift on their part, before they heard of that defeat? why not as soon as they knew he was sent to America? why not on Washington's defeat, or before his first expedition, as soon as ever this province was attacked, and they learnt that the enemy had built a fort in it? but the truth is, the order was sent, not immediately on the news of Braddock's defeat; the date of the order will show that it was a month after that

news arrived in England. But it was immediately after they had advice, that the governor had refused a grant of fifty thousand pounds to the crown for the defence of the proprietaries' province, because their estate was taxed in the bill, alleging restrictions from them on that head; against which all the world exclaimed an universal odium was falling on their heads, and the king's wrath justly dreaded; then it was, that the boasted order issued. And yet as soon as their fears subsided, it was sincerely repented, and every underhand step taken to get the act, in which their gift was fixed, disapproved at home; though if they had succeeded, when the bills emitted were abroad, and in the hands of the public, many of the poor soldiers, who had received them in pay for their services, would have been ruined, and multitudes of others greatly injured. And after all, this free gift, to be immediately paid, is not yet paid, though more than a year is elapsed since the order was given; and contracts, entered into by the commissioners in confidence of receiving that money, are yet unsatisfied, to the loss and disappointment of many, and great detriment to the service.

However, if we will have a land tax, they are pleased to form a bill for us, or at least to direct what clauses shall be in, and what shall not be in it, thus violating the most essential right of the commons in a British constitution! and with this particular injunction, that the tax shall be laid for no more than one year; and shall not exceed four shillings in the pound on the income; which, estimating estates at twenty years' purchase, is about a fifth of a twentieth, or in plainer words, a hundredth part of the value. Perhaps this may be well enough in times of tranquillity; but when a province is invaded, must it be given up to the enemy, if a tax of the hundredth penny is not sufficient to save it? Yes, that is our present situation; for the proprietaries' instructions are, it seems, unalterable. Their governor is bound to observe and enforce them, and must see the king's province perish before his eyes, rather than deviate from them a single tittle. This we have experienced within a few days, when advantage being cruelly taken of our present unhappy situation, the prostrate condition of our bleeding country, the knife of the savages at her throat, our soldiers ready to mutiny for want of pay and necessaries, our people flying in despair from the frontier for want of protection, the assembly was compelled (like Solomon's true mother) to wave her right, to alter our money bills, abridge our free grant to the crown by one half, and, in short, to receive and enact a law not agreeable to our judgments, but such as was made for us by the proprietary instructions, and the will and pleasure of the governor's council; whereby our constitution and the liberties of our country are wounded in the most essential part, and even violated and destroyed. We have reason to confide, however, in the justice of our sovereign and a British parliament, that this tyranny shall not long subsist; and we hope no time will be lost in making the proper application.

In fine, we must say, in justice to the house, that the proprietary's charge against the assembly, as "being inclined by their authority to tax the proprietary estate disproportionately, &c." is, to our knowledge, groundless and unjust. They had as little inclination as authority to wrong him. They have not, it seems, authority enough to oblige him to do justice. As to their inclination, they bear, every one of them, and maintain, the character of honest men. When the proprietaries shall be truly willing to bear an equitable part of the public burden; when they shall renounce their exorbitant demand of rent as the exchange shall then be; make restitution of the money which they have exacted from the assemblies of this province, and sincerely repent of their extortion, they may then, and not till then, have some claim to the same noble title.

The proprietaries have for a long series of years made a great secret of the value of their estate and revenue. By accident the following authentic paper is fallen into our hands, and will serve as a ground-work on which the reader may be enabled to form some idea of the value of that estate in Pennsylvania. It is a copy of an original paper drawn by Mr. Thomas Penn himself many years ago, and endorsed

"My estimate of the province, T. Penn."

ESTIMATE.

	Pennsylva. Cur.
1. LANDS granted since my arrival are very near 270,000 acres, of which not 10,000 have been paid for; more than of old grants are remaining unpaid; is	£ 41,850 0 0
2. The rent on the said grants is 550*l.* sterling a year, which at 20 years' purchase, and 165 per cent. exchange, is	18,150 0 0
3. The old rent, 420*l.* a year sterling, at ditto, is	15,246 0 0
4. Lands granted between roll and the first article are 570*l.* a year sterling, which at 20 years' purchase, and 165 per cent. is	18,810 0 0
5. To the difference between 420*l.* and 570*l.* for arrearages of rents which may be computed at half the time of the other arrearages, that is 11 years at 165 per cent.	2,722 10 0
6. Ferries let out on short leases, the rents being 40*l.* a year, are worth	1,000 0 0
7. Lands settled in the province, for which no grants are yet passed, except a few since the above account was taken, not less than 400,000 acres, which at 15*l.* 10*s.* amounts to	63,000 0 0
8 The rent at an halfpenny an acre is 833*l.* 6*s.* 8*d.* a year sterling, reckoned as above, is	27,560 0 0
	£ 188,378 10 0

MANORS.

1 Conestogoe, 65 miles from the city, 13,400 acres at 40*l.* per hundred acres	5,360 0 0
Carried over	£ 193,638 10 0

	Pennsylva. Cur.
Brought over	£ 193,638 10 0
2 Gilbert's, 25 miles from the city, 3200 acres at 70*l.* per hundred acres	2,240 0 0
3 Springfield, 12 miles from the city, 1600 acres at 75*l.* per hundred acres	1,200 0 0
4 Highlands, 35 miles from the city, 2500 acres at 30*l.* per hundred acres	750 0 0
5 Spring-town, 37 miles from the city, 10,000 acres at 35*l.* per hundred acres	3,500 0 0
6 Vincent's, 40 miles from the city, 20,000 acres at 35*l.* per hundred acres	7,000 0 0
7 Richland's, 35 miles from the city, 10,000 acres at 15*l.* per hundred acres	1,500 0 0
9 About 20 tracts in the several counties, mostly 500 acres each; reckoned 10,000 at 40*l.*	4,000 0 0
Springett's-bury, 207 acr. at 5*l.*	1,035 0 0
8 On the north side of the town, 50 acres at 30*l.*	1,500 0 0
Back of the said land 15 acres at 10*l.*	150 0 0
9 Lot in the bank at the north end of the town, 200 feet at 3*l.*	600 0 0
10 A front and bank lot between Vine and Sassafras street, 102 feet at 6*l.*	612 0 0
11 Bank lot between Cedar and Pine street, 204 feet at 3*l.*	612 0 0
12 Front lot on the side of Cedar, 102 feet at 3*l.*	306 0 0
13 Ditto between Cedar and Pine street, 160 feet at 2*l.*	320 0 0
14 Bank lot between the same streets, 40 feet at 2*l.*	80 0 0
15 Marsh land near the town, 600 acres at 3*l.*	1,800 0 0
16 Ditto 200 acres at 1*s.* sterling rent, and 165 per cent. is	330 0 0
Lands within the draft of the town, at least 500 acres, 250 nearest Delaware at 15*l.* per acre	3,750 0 0
250 nearest Schuylkill, at 10*l.* per acre	2,500 0 0
17 Omitted.——Streiper's tract in Bucks county, 35 miles, 5000 acres, at 25*l.*	1,250 0 0
18 The rents of the above manors and lands being 77,072 acres, at a halfpenny per acre. 20 years purchase, and 165 per cent. exchange, is	5,398 12 0
	£ 233,972 2 0
The government to be calculated at no less than was to have been paid for it, viz. 11,000*l.* at 165 per cent. is	18,150 0 0
Carried over	£ 252,122 2 0

In this calculation no notice is taken of the thirds reserved on the bank lots (a copy of the patents J. Penn has by him to show the nature of them*) and nine tenths of the province remains undisposed of.

Three fifths of all royal mines is reserved in the grants, and in all grants since the year 1732. One fifth of all other mines, delivered at the pit's mouth without charge, is also reserved

No value is put on the proprietor's right to escheated lands; and, besides these advantages, several offices are in the proprietor's gift of considerable value.

Register General, about	£ 200
Naval officer,	300
Clerk of Philadelphia,	400
——— Chester,	300
——— Bucks,	200
——— Lancaster,	200

Besides several other offices of less value. These are only guessed at.

The above paper has no date, but by sundry circumstances in it, particularly there being no value put on the thirds of the bank lots, because they were not then fallen in; and by the valuation put on the lands (which is very different from their present value) it must have been drawn while Mr. Thomas Penn resided in Pennsylvania, and probably more than twenty years ago: since which time a vast addition has been made to the value of the reserved lands, and a great quantity of land has been disposed of, perhaps equal to all preceding.

We must therefore add to the above sum of 252,122*l.* 2*s.* the following articles, viz.

	Pennsylva. Cur.
1. For the increased value of the lands of the Conestogoe manor now valued at 400*l.* per hundred acres, and in the above estimate valued only at 40*l.* per hundred, the said increased value being 300*l.* per hundred on 13,400 acres,	48,240 0 0
2 For the increased value of Gilbert's manor, now worth 400*l.* per hundred acres,	10,560 0 0
3 For ditto on Springfield manor, now worth 500*l.* per hundred acres,	6,800 0 0
4 For ditto on Highland's manor, now worth 350*l.* per hundred acres,	8,000 0 0
5 For ditto on Springtown, now worth 400*l.* per hundred acres,	36,500 0 0
6 For ditto on Vincent's manor, now worth 300*l.* per hundred acres,	53,000 0 0
7 For ditto on Richland's, now worth 450*l.* per hundred acres,	43,500 0 0
9 For ditto on the 20 tracts, now worth 300*l.* per hundred acres,	26,000 0 0
Carried over	£ 480,722 2 0

* By these patents, at the end of fifty years, the proprietor was to have one third of the value of the lots and the buildings, and other improvements erected on them.

	Pennsylva. Cur.
Brought forward	£484,722 2 0
8 For ditto on Springetsbury, &c. at least.	2,685 0 0
9 For ditto on all the articles of lots from No. 9 to 14, being trebled in value,	5,060 0 0
15 For ditto on Marsh land, now worth 20*l.* per acre,	10,200 0 0
16 For ditto on the value of lands within the draft of the town, now worth one with another, 50*l.* per acre,*	18,750 0 0
17 For ditto on Streiper's tract, now worth 325*l.* per hundred	15,000 0 0
[On the next articles for the reserved rent, and the value of the government, we add no advance.]	
For the thirds of the bank lots and improvements on them, as they fell in after this estimate was made; reckoning every 20 feet of ground with its improvements, one with another, worth 480*l.*, the thirds being 160*l.* for each 20 feet,	37,280 0 0
	573,697 2 0
Thus far for the present value of what was then estimated, but since that time, very great quantities of land have been sold, and several new manors laid out and reserved; one of which, viz. that of Conedoguinet, is said to contain 30,000 acres; the quantity sold since the estimate, must be at least equal to what was sold before, as the people are doubled, and the manors probably equal in quantity: we may therefore suppose that a fair estimate of the lands sold, rents and manors reserved, and new towns laid out into lots, since the above estimate, would be at least equal to it, that is another tenth, and amount also to	573,697 2 0
Carried over	£1,147,894 4 0

* The lots of land within the plan of the town were originally promised to be given to the purchasers of land in the country. But that has been long since discontinued; and for many years past the proprietor has shut the office, and forbid his agents even to sell any more of them; intending to keep them all, till he can let them out on high ground rents, or on building leases. Five hundred acres divided into house lots, and disposed of in this manner, will alone make a vast estate. The old proprietor likewise in his plan of the city, laid out five large squares, one in each quarter, and one in the centre of the plan, and gave the same to the inhabitants for public uses. This he published in all his accounts of the country, and his papers of invitation and encouragement to settlers; but as no formal deed or conveyance of those squares is now to be found, the present proprietor has resumed them, turned them again into private property, that the number of his lots may be increased; and his surveyor-general in his lately published plan of the city, has concealed all those squares by running intended streets over them. A proceeding equally odious to the people, and dishonourable to the family!

	Pennsylva. Cur.
Brought over	£1,147,894 4 0
For eight of these nine tenths of the province which were not disposed of at the time of making the estimate; note, the province grant to William Penn is of three degrees of latitude, and five of longitude; each degree of latitude contains 69½ statute miles, and each degree of longitude about lat. 40. contains 53 statute miles; so the dimensions of the province are 265 miles by 206½, which gives for its contents 55,252½ square miles, or thirty five millions three hundred and sixty one thousand six hundred acres; eight tenths of this quantity, is 28,289,280 acres, which at 15*l.* 10*s.* per 100 acres (the present selling price) is	4,384,838 8 0
For the yearly quit rent on 28,289,280 acres at a halfpenny sterling per acre, is 58,936*l.* per annum, which at 165 per cent. and 20 years purchase, is,	1,856,484 0 0
For the additional value on one tenth part, at least, of those eight-tenths, which being picked out of the best of the lands after every purchase from the Indians, before any private person is allowed to take up any, and kept for 20 or 30 years, is to be sold at a medium for 300*l.* per 160 acres advance; this on 2,828,928 acres, is	8,486,784 0 0
For the three fifths of all royal mines, and one fifth of all other mines reserved to these lords proprietors, we can as yet estimate no sum, and must leave it a blank as we find it, but since in the ridges of mountains not yet settled, some very valuable specimens of ores have been found by travellers, it is not unlikely this article may in time become considerable beyond computation.	
For the offices we shall likewise make no estimation though they are greatly increased in number and value, with the increase of people; as we believe the proprietaries do not raise immediate money from the grants of those offices at present, they being chiefly disposed of to bribe or reward their partizans and favourites; in which however they may find their account.	
For the escheats we likewise add nothing; for though it is thought a valuable article, we have no information on which	
Carried over	£15,875,500 12 0

Pennsylva. Cur.

Brought over £15,875,593 12 0

we can form any judgment concerning its value, it must however be continually increasing.

There is another article, we are greatly at a loss about, which is the interest of money arising to the proprietors from securities on lands possessed by persons unable to make present payment. These pay not only quit-rent for the land but interest for the purchase money. This interest* is thought to be a very considerable income, but we cannot estimate it.

The three lower counties on Delaware, which are a distinct territory and government from the province of Pennsylvania, and held by a different title, are also a very valuable part of the proprietary estate; though what value should be put on the same is at present difficult to say.

Total in Pennsylvania currency, - - - £ 15,875,500 12 0

In sterling, about ten millions!

But on the whole, it appears pretty clearly, that deducting all the articles containing the valuation of lands yet unsold, and unappropriated within their patent, and the manors and rents to be hereafter reserved, and allowing for any small over-valuations in their present reserved lands and incomes [though it is thought if any be it will not be found to exceed the under-valuation in other instances] there cannot remain less than a million of property which they now at this time have in Pennsylvania.

And in that province there are about twenty thousand families, to each of which, one with another, there does not belong more than three hundred pounds of property, if so much; which multiplied by twenty thousand gives six million pounds for the whole property of the people there.

The proprietaries then have in present possession a property there at least equal to one sixth of that of the people. They ought therefore to pay the same proportion of the taxes.

That the reader may form some judgment of the profits made by this monopoly of land in America, in favour of the house of Penn, we shall just mention, that the land is first purchased of the Indians within the limits of their grant: the Indians of late years have somewhat raised their price; and for the last great purchase in 1754, which was of about seven millions of acres, they demanded (how much do you think?) no less than two thousand dollars, amounting, at seven and sixpence currency each, to seven hundred and fifty pounds.

The land so bought the proprietor has the moderation to sell (except the best of it reserved in manors for himself) at so low a price as 15*l.* 10*s.*

* See Fisher's account hereafter.

Pennsylva. Cur

per hundred acres, which will produce - - - £ 1,085,000 0 0

Deduct the purchase money . 750 0 0

Remains profit 1,084,250 0 0

Besides the profit of a tenth of the seven millions of acres, reserved in manors to be sold hereafter at an advance of at least three hundred pounds per hundred acres, - - 2,100,000 0 0

And also the quit-rent to be reserved on seven millions of acres, at a halfpenny sterling per acre, 14,583*l.* 6*s.* 8*d.* which at 165 per cent. and 20 years purchase, is worth 481,250 0 0

Profit, in all, £ 3,665,500 0 0

But the Indian council at Onondago not being satisfied with the sale of so much land at once, the proprietors have since been obliged to disgorge a part of the hunting country they had not paid for, and re-convey the same to the Indians, who, when they are disposed to sell it, may possibly demand two thousand dollars more, for which the above account must then have credit.

One would think, that where such good bargains are bought of the poor natives, there should be no occasion for fraudulent art to over-reach them, in order to take more than is granted; and that if a war occasioned by such injuries, should be drawn upon the innocent inhabitants, those who were the cause of the war, if they did not, as in justice they ought, bear the whole expense of it, at least they would not refuse to bear a reasonable part. Whether this has ever been the case is now a subject of public inquiry.

But let us see how the land bought in such lumping pennyworths of the natives by the monopolist, is huckstered out again to the king's subjects. To give the reader some idea of this, after remarking that fifteen pounds ten shillings per hundred acres for wild land, is three times dearer than the proprietor of Maryland's price, and ten times dearer than his majesty's lands in Virginia and Carolina, both as good if not better countries, we shall present him with a genuine account, stated under the hand of the proprietor's receiver-general, obtained with great difficulty by the purchaser of two tracts of land, some time after he had paid his money; when on more particular consideration of the sum paid compared with the quantity bought, he imagined he had paid too much. The account is as follows, viz.

John Fisher in right of Jacob Job. *Dr.*

To land, 423 acres 53 perches, in Pextang township, Lancaster county, granted to said Job, by warrant of March 19, 1742, - - - £ 65 12 1

Interest from 1st March, 1732, to 19th March, 1742, is 10 years 18 days, 39 11 2

105 3 3

19th March, 1742, paid 15 0 0

Carried over 90 3 3

Pennsylva. Cur.

Brought over	£ 90	3	3
Interest from 19th March, 1742, to 20th February, 1747, is 4 years, 11 months, 1 day, - - - -	26	11	11
Quit-rent to next month is 15 years, 13*l.* 4*s.* 7*d.* sterling, at 85 per cent.	24	9	6
	141	4	8

John Fisher in right of Thomas Cooper, *Dr.*

To land, 268 acres in Pextang township, Lancaster county, granted by warrant of 8th January, 1743, to said Cooper,	41	10	9
Interest from 1st March, 1737, to 8th January, 1743, is 5 years, 10 months, 9 days, - - - -	14	11	9
	56	2	6
19th January, 1743, paid	7	10	0
	48	12	6
Interest from 9th January, 1743, to 20th February, 1747, is 4 years, 1 month, 11 days, - - - - -	11	19	10
Quit-rent to next month is 10 years, 5*l.* 11*s.* 8*d.* sterling, at 85 per cent.	10	6	7
	70	18	11

20th February, 1747.

£ 141	4	8	
70	18	11	
212	3	7	
10	0	0	Transfer, &c.
212	13	7	

Philadelphia, 23d February, 1747.

Received of John Fisher, two hundred and twelve pounds, three shillings and seven pence, in full for 423 acres in Pextang township, granted by warrant of 19th March, 1742, to Jacob Job, and for 268 acres in the same township, by warrant of 9th January, 1743, to Thomas Cooper, both in the county of Lancaster.

£ 212	3	7
10	0	fees
212	13	7

N. B. The quit-rent in full to 1st March, 1747.

For the honourable proprietaries,
LYNFORD LARDNER, Receiver Gen.

The purchaser not being skilled in accounts, but amazed at the sum, applied to a friend to examine this account, who stated it over as follows, viz.

John Fisher in the right of Jacob Job, *Dr.*

1742. 19th March.	To 423 acres, 50 per. of land, in Pextan county, Lancaster, granted to said Job by warrant dated this day - - -	£	65	12 1
	By cash paid that day		15	0 0
	Carried forward	£	50	12 1
	To interest on 50*l.* 12*s.*			
	Brought over	£	50	12 1
	1*d.* from the 19th March 1742, to 20th February, 1747, being four years eleven months and one day - - - - -		14	18 9
	To five years quit-rent for said land at one halfpenny sterl. per acre per ann. viz, from March, 1742, the time the land was surveyed (for quit-rent ought not to be paid before) to March, 1748, amounting in the whole to 4*l.* 8*s.* 4d. sterl. at eighty five per cent. the excharged in the account delivered - - -		8	5. 9

20th February, 1747.

Sum due on Job's right £ 73 16 7

John Fisher in right of Thomas Cooper, *Dr.*

1743. 9th Jan.	To 268 acres of land in Pextan aforesaid, granted said Cooper by warrant this day -	£	41	10 9
	By cash paid that day		7	10 0
	9th January, 1743, balance due	£	34	0 9
	To interest on 34*l.* 0*s.* 9*d.* from 9th January, 1743, to 20th February, 1747, being four years one month and eleven days.		8	7 8
	To four years and two months quit rent for said lands, viz. from January, 1743, to the 1st March, 1747, amounting in the whole to 2*l.* 6*s.* 6*d.* sterling, at eighty-five per cent. - - -		4	7 2¼

20th Feb. 1747.

Sum due on Cooper's right £ 46 15 7¼

In Feb. 1747, John Fisher obtained a proprietary patent for the lands above-mentioned. But by the accompts then exhibited to him, and which he paid, he was charged on Job's right one hundred and forty-one pounds four shillings and eight pence, which is sixty-seven pounds eight shillings and a penny more than the above account, and also was charged on Cooper's right, seventy pounds eighteen shillings and eleven pence, which is twenty-four pounds three shillings and three pence three farthings more than the above accompt of Cooper's. So that by the two accompts it is supposed he has paid ninety-one pounds eleven shillings and four pence three farthings more than could legally be received from him.

The reason of such great difference in the accompts are as follow, viz.

1st. That interest has been charged on the consideration money for Job's land for ten years and eighteen days, before the land was surveyed.

2d. That quit-rent has also been charged for that time at 85 per cent.

3d. That the principal and interest to the time of warrant and survey were added together, and that interest was charged for that total to the time the patent was granted.

4th. That interest has been charged on the consideration money for Cooper's land, for five years ten months and eight days, before the land was surveyed.

5th. That quit-rent has also been charged for that time at 85 per cent.

6th. That the principal and interest to the time of warrant and survey were added, and interest charged for that total to the time the patent was granted, which is compound interest.

To these remarks of the accountant we shall only add, that the price of exchange between Philadelphia and London is not fixed, but rises and falls according to the demand for bills; that eighty-five per cent. charged for the exchange in this account is the highest exchange that perhaps was ever given in Pennsylvania, occasioned by some particular scarcity of bills at a particular time; that the proprietor himself, in his estimate reckons the exchange but at 65, which is indeed near the medium, and this charge is twenty per cent. above it. That the valuing the currency of the country according to the casual rate of exchange with London, is in itself a false valuation, the currency not being really depreciated in proportion to an occasional rise of exchange; since every necessary of life is to be purchased in the country, and every article of expense defrayed by that currency (English goods only excepted) at as low rates after as before such rise of exchange; that therefore the proprietor's obliging those who purchase of him to pay their rents according to the rate of exchange, is unjust, the rate of exchange including withal the risk and freight on remitting money to England; and is besides a dangerous practice, as the great sums to be yearly remitted to him, put it in the power of his own agents to play tricks with the exchange at pleasure, raise it at the time of year when they are to receive the rents, by buying a few bills at a high price, and afterwards lower it by refraining to buy till they are sold more reasonably.

By this account of the receiver-general's, it appears we have omitted two other articles in the estimation of the proprietary estate, viz.

For the quit-rents of lands many years before they are granted!

For the interest of the purchase-money many years before the purchases are made!

On what pretence these articles of charge are founded, how far they may be extended, and what they may amount to, is beyond our knowledge; we are therefore obliged to leave them blank till we can obtain more particular information.

Although we have not in this work taken particular notice of the numerous falsehoods and calumnies which were continually thrown out against the assembly and people of Pennsylvania, to keep alive the prejudices raised by the arts of the proprietary and his agents; yet as we think it will not be deemed improper to give the readers some specimen of them, we shall on that account, and as it affords additional light concerning the conduct and state of that province, subjoin a paper printed and published here in September, 1757, by a gentleman who had the best opportunities of being acquainted with the truth of the facts he relates. Any other proof, indeed, of their authenticity can scarce be thought requisite, when 'tis known that since that time no one has ever offered to publish the least thing in contradiction; although before, scarce a week elapsed without the newspapers furnishing us with some anonymous abuse of that colony.

To the printer of the Citizen, or, General Advertiser.

SIR,—In your paper of the ninth instant, I observe the following paragraph, viz. "The last letters from Philadelphia bring accounts of the scalping the inhabitants of the back provinces by the Indians; at the same time the disputes between the governor and the assembly are carried on to as great a heighth as ever, and the messages sent from the assembly to the governor, and from the governor to the assembly, are expressed in terms which give very little hopes of a reconciliation. The bill to raise money is clogged, so as to prevent the governor from giving his consent to it; and the obstinacy of the quakers in the assembly is such, that they will in no shape alter it; so that while the enemy is in the heart of the country, cavils prevent any thing being done for its relief. Mr. Denny is the third governor with whom the assembly has had these disputes within a few years."

As this paragraph, like many others heretofore published in the papers, is not founded in truth, but calculated to prejudice the public against the quakers and people of Pennsylvania, you are desired to do that injured province some justice in publishing the following remarks; which would have been sent you sooner had the paper come sooner to my hands.

1 That the scalping of the frontier inhabitants by the Indians is not peculiar to Pennsylvania, but common to all the colonies in proportion as their frontiers are more or less extended and exposed to the enemy. That the colony of Virginia, in which there are very few, if any, quakers, and none in the assembly, has lost more inhabitants and territory by the war than Pennsylvania. That even the colony of New York, with all its own forces, a great body of New-England troops encamped on its frontier, and the regular army under lord Loudon posted in different places, has not been able to secure its inhabitants from scalping by the Indians; who coming secretly in very small parties skulking in the woods, must sometimes have it in their power to surprise and destroy travellers, or single families settled in scattered plantations, notwithstanding all the care that can possibly be taken by any government for their protection: centinels posted round an army, while standing on their guard, with arms in their hands, are often killed and scalped by Indians. How much easier must it be for such an enemy to destroy a ploughman at work in his field?

2. That the inhabitants of the frontiers of Pennsylvania are not quakers, were in the beginning of the war supplied with arms and ammunition by the assembly, and have frequently defended themselves and repelled the enemy, being withheld by no principle from fighting; and the losses they have suffered were owing entirely to their situation, and the loose scattered manner in which

they had settled their plantations and families in the woods, remote from each other, in confidence of lasting peace.

3. That the disputes between the late and present governors and the assembly of Pennsylvania, were occasioned and are continued chiefly by new instructions from the proprietors to those governors, forbidding them to pass any laws to raise money for the defence of the country unless the proprietary estate, or much the greatest part of it, was exempted from the tax to be raised by virtue of such laws, and other clauses inserted in them by which the privileges long enjoyed by the people, and which they think they have a right to, not only as Pennsylvanians but as Englishmen, were to be extorted from them, under their present distresses. The quakers, who, though the first settlers, are now but a small part of the people of Pennsylvania, were concerned in these disputes only as inhabitants of the province, and not as quakers; and all the other inhabitants join in opposing those instructions, and contending for their rights, the proprietary officers and dependants only excepted, with a few of such as they can influence.

4. That though some quakers have scruples against bearing arms, they have, when most numerous in the assembly, granted large sums for the king's use, (as they express it) which have been applied to the defence of the province; for instance, in 1755 and 1756, they granted the sum of fifty-five thousand pounds to be raised by a tax on estates real and personal; and 30,000 pounds to be raised by excise on spirituous liquors; besides near ten thousand pounds in flour, &c. to general Braddock, and for cutting his roads, and ten thousand pounds to general Shirley in provisions for the New England and New York forces, then on the frontiers of New York; at the same time that the contingent expenses of government, to be otherwise provided for, were greatly and necessarily enhanced. That, however, to remove all pretence for reflection on their sect, as obstructing military measures in time of war, a number of them voluntarily quitted their seats in assembly in 1756; others requested their friends not to choose them in the ensuing election, nor did any of that profession stand as candidates or request a vote for themselves at that election, many quakers refusing even to vote at all, and others voting for such men as would and did make a considerable majority in the house who were not quakers; and yet four of the quakers, who were nevertheless chosen, refused to serve, and writs were issued for new elections, when four others not quakers were chosen in their places; so that of 36 members, the number of which the house consists, there are not at the most above 12 of that denomination, and those such as are well known to be for supporting the government in defence of the country, but are too few, if they were against such a measure, to prevent it.

5. That the bill to raise money, said in the above article of news, to be "so clogged as to prevent the governor from giving his assent," was drawn in the same form, and with the same freedom from all clogs, as that for granting sixty thousand pounds which had been passed by the governor in 1755, and received the royal approbation; that the real clogs or obstructions to its passing were not in the bill, but in the above-mentioned proprietary instructions; that the governor having long refused his assent to the bill, did, in excuse of his conduct, on lord Loudon's arrival at Philadelphia in March last, lay his reasons before his lordship, who was pleased to communicate them to one of the members of the house, and patiently to hear what that member had to say in answer, the governor himself being present; and that his lordship did, finally declare himself fully satisfied with the answers made to those reasons, and give it as his opinion to the governor that he ought immediately to pass the bill, any instructions he might have to the contrary from the proprietors notwithstanding; which the governor accordingly complied with, passed the bill on the 22d of March, and the money, being 100,000*l.* for the service of the current year, has been ever since actually expending in the defence of the province. So that the whole story of the bill's not passing, the clogging of the bill by the assembly, and the obstinacy of the quakers preventing its passage, is absolutely a malicious and notorious falsehood.

6. The assertion of the news-writer, "that while the enemy is in the heart of the country, cavils prevent any thing being done for its relief," is so far from being true, that, 1st. The enemy is not nor ever was in the heart of the country, having only molested the frontier settlements by their parties. 2dly. More is done for the relief and defence of the country, without any assistance from the crown, than is done perhaps by any other colony in America; there having been, soon after the war broke out, the following forts erected at the province expense, in a line to cover the frontier, viz. Henshaw's fort on Delaware, fort Hamilton, fort Norris, fort Allen, fort Franklin, fort Lebanon, fort William Henry, fort Augusta, fort Halifax, fort Granville, fort Shirley, fort Littleton, and Shippensburg fort, besides several smaller stockades and places of defence, garrisoned by troops in the pay of the province; under whose protection the inhabitants, who at first abandoned their frontier settlements, returned generally to their habitations, and many yet continue, though not without some danger, to cultivate their lands; by these Pennsylvania troops, under col. Armstrong, the greatest blow was given to the enemy last year on the Ohio, that they have received during the war in burning and destroying the Indian town of Kittanning, and killing their great captain Jacobs, with many other Indians, and recovering a number of captives of their own and the neighbouring provinces; besides the garrisons in the forts, eleven hundred soldiers are maintained on the frontier in pay, being armed and accoutred, by the province, as ranging companies. And at Philadelphia fifteen iron cannon, eighteen pounders, were last year purchased in England and added to the fifty they had before, either mounted on their batteries, or ready to be mounted, besides a train of artillery, being new brass field-pieces, twelve and six pounders, with all their appurtenances in extreme good order, and a magazine stored with ammunition, a quantity of large bomb-shells, and above two thousand new small arms lately procured, exclusive of those in the hands of the people. They have likewise this summer fitted out a twenty gun province ship of war, to scour the coast of privateers, and protect the trade of that and the neighbouring provinces, which is more than any other colony to the southward of New England has done. Pennsylvania also by its situation covers the greatest

part of New Jersey, all the government of the Delaware counties, and great part of Maryland, from the incursions of the Indians, without receiving any contribution from those colonies, or the mother-country towards the expense.

The above are facts, consistent with the knowledge of the subscriber, who but lately left Philadelphia, is now in London, is not nor never was a quaker, nor writes this at the request of any quaker; but purely to do justice to a province and people of late frequently abused in nameless papers and pamphlets published in England. And he hereby calls upon the writer of that article of news to produce the letters out of which he says, he has drawn those calumnies and falsehoods, or to take the shame to himself.

WILLIAM FRANKLIN.

Pennsylvania Coffee-House,
London, Sept. 16, 1757.

To what is said in the foregoing letter, concerning col. Armstrong's expedition to Kittanning, it may not be amiss to add, for the information of the reader, that it was with no small difficulty the commissioners, who were joined with the governor in the disposition of the money granted for the war, obtained the employing a part of the provincial forces as rangers. They repeatedly remonstrated to the governor, that the only effectual manner of carrying on a war with Indians was to fight them in their own way, i. e. to send parties frequently into the Indian country, to surprise them in their hunting and fishing, destroy their corn fields, burn their habitations, and, by thus continually harassing them, oblige them either to sue for peace, or retire farther into the country. The experience of many years Indian war in New England was in favour of this measure. The governor himself could not but acknowledge its expediency. There were motives, however, which, with him, outweighed all other considerations; and induced him though publicly, to approve, yet secretly to decline carrying it into execution. A militia law was the grand object he had in view, in which he aimed to have the sole nomination of all the officers. These were of course to be proprietary minions and dependants, who, by means of their power, were to awe and influence the elections, and make a change in the assembly: for draughts of such as were most likely to give opposition might easily be made and sent to garrison the frontier. Should therefore the commissioners' scheme of carrying the war into the enemy's country, be attended with success, and a stop be thereby put to their future incursions, the governor's main pretext for a militia (which was the enabling him to defend the frontier) would of consequence have no longer any appearance of weight. The commissioners, notwithstanding, obstinately persevered in urging that parties should be sent out in the manner they recommended. The governor was at length obliged to consent and give orders to colonel Armstrong for that purpose. Under-hand measures seem however to have been taken to render this project fruitless. Such delays were given from time to time to the march of the forces, after the intention of the undertaking was publicly known (which by the bye was to have been kept a secret) that the enemy might easily have received intelligence of our designs; and moreover, such a considerable number of men were added to the party as rendered it highly improbable they should reach the place of their destination undiscovered, upon which depended the whole of their success. By great good luck, they nevertheless unexpectedly arrived at Kittanning, and succeeded as above. Encouraged by this fortunate event of their first attempt, the commissioners earnestly pressed that this blow might be followed by another of the same kind, so that the enemy might be kept in continual apprehensions of danger. But these encouragements to the commissioners, to persist in their plan of operations, were inducements with the new governor, as they had been with his predecessor, to evade a compliance.

The darling project of a militia law was of more consequence than the preservation of the blood and treasure of people with whom he had no natural connexion. And the result is, that notwithstanding the commissioners have over and over strenuously endeavoured to have parties of rangers sent again into the enemy's country, they have never since been able to prevail with the governor to send them. On the contrary, though they could furnish ten parties for one of the Indians, the forces have been confined within the forts, taught regular military discipline (which is in fact undisciplining them for Indian war) and allowed to do scarce any thing but garrison duty. In the mean time the Indians have been suffered to come down between the forts, murder and scalp the inhabitants, and burn and destroy their settlements, with impunity. That a militia, had the governor such a one as he wishes, could not prevent these outrages, is obvious to every man of common understanding. Frequent trials of this have been made in Virginia, and other governments where militias have been long in use. The consequence of which was, that after the governors had, upon the news of any incursions of the enemy, taken the inhabitants from their several businesses and occupations (oftentimes farmers in the midst of harvest) furnished provisions and other necessaries, and marched them, at a great expense, to the place attacked, it was found that the enemy were fled, and perhaps doing mischief in another part of the frontier, at fifty or a hundred miles distance. The people therefore say with truth, that it would be far less expensive and inconvenient to them, to raise and pay a number of rangers to be continually employed in that service. And it is certain, that were but a few rangers properly employed, they would be more effectual in subduing such an enemy, than all the militia or regular forces on the continent of America. The sending of these against scouting parties of Indians, being, as the proverb has it, setting a cow to catch a hare.

Account of sundry sums of money paid by the province of Pennsylvania for his majesty's service since the commencement of hostilities by the French in North America, exclusive of the general contingent expenses of the government, which have from that time increased very considerably.

EXTRACTED FROM THE JOURNALS OF THE ASSEMBLY.

		Pennsylva. Cur
1754, and 1755.	For provisions supplied the king's forces under the command of	

		Pennsylva. Cur.
	general Braddock; for opening and clearing a road towards the Ohio; and for establishing a post between Winchester in Virginia and Philadelphia, for the use of the army, at the request of the said general	£ 8,195 14 8
	For provisions supplied the New England, and New York forces, under general Johnson	10,000 0 0
	For clothing sent the forces under general Shirley	514 10 1
	For presents to the Six nations and other Indians in alliance with the crown of Great Britain, and the expense attending two treaties held with them for securing them to the British interest	2,023 5 0
	For maintenance of Ohio and other Western Indians, who had taken refuge in Pennsylvania; French deserters; soldiers' wives belonging to Braddock's army; arms and ammunition delivered to such of the frontier inhabitants as were not able to purchase any for their defence; relief and support of sundry of said inhabitants who were driven from their plantations by the enemy; and for expresses and other purposes for his majesty's service	5,653 13 2
	[The above sums were paid out of the treasury and loan office, and by money borrowed on the credit of the house of assembly before the governor could be prevailed on to pass any bills for granting an aid to his majesty.]	
1756.	For raising, paying, and maintaining forces; building forts; maintaining and treating	
	Carried over	£ 26,387 2 11

		Pennsylva. Cur.
	Brought over	£ 26,387 2 11
	with the king's Indian allies; support of French neutrals sent from Nova Scotia; billeting and supplying with necessaries the king's regular forces; and other purposes for his majesty's service, as recommended by his ministers. [By two acts of assembly, 60,000*l.* and 30,000*l.*]	90,000 0 0
1757.	For ditto by another act of assembly	100,000 0 0
1758.	For ditto by ditto. [Note 2700 men were raised and employed this year in his majesty's service, by the province of Pennsylvania, in pursuance of Mr. secretary Pitt's letter.]	100,000 0 0
	For support of a ship of war for protection of trade, (by a duty on tonnage, &c.) for a six months' cruise	6,425 15 0
	For interest paid by the province for money borrowed for his majesty's service on the credit of the assembly; the charges attending the printing and signing the paper-money, and collecting, and paying the several taxes granted his majesty to the provincial treasurer and trustees of the loan office, with their and the provincial commissioners' allowances for their trouble, may at least be estimated at	5,000 0 0
	For sundry Indian expenses, omitted in the above	38 13 0
		£ 327,851 10 11
	From which deduct one third to reduce the sum to sterling value; an English shilling passing for 1*s.* 6*d.* in Pennsylvania	109,283 16 11
	Sterling,	£ 218,567 14 0

As the reader may possibly be curious to know, whether any similar disputes arose between the proprietaries and the several assemblies of the

territory, or three separate counties, it may be proper to inform him, that the forbearances of these gentlemen in that district, were altogether as remarkable as their assumptions in the province; and to refer him to the following extract of a genuine letter of Mr. secretary Logan's to one Henry Goldney, an intimate friend of the first proprietary William Penn for a solution of all doubts concerning the difference.

"*Henry Goldney.*

"PHILADELPHIA, 3d month the 12th, 1709.

"ESTEEMED FRIEND,—I was favoured last fall with thine and other friends answer to mine of 3d month last; the contents of which were extremely satisfactory, and on my part I shall not be wanting to discharge my duty to the utmost of my power; but in my opinion, since the proprietor has several times mentioned that he had proposals made to him for the purchase of a large tract of land on Susquehannah, for which he had an offer of 5000*l.* sterling, it would be most advisable for him to accept of any such terms, that so he may speedily have the management of his country to himself, by paying the debt there which he has contracted upon it; to which I wish thee and his other good friends would earnestly press him, for in himself I know he is in such cases somewhat too doubtful and backward.

"I now design, through the greatest confidence in thy friendship both to him and me, to be very free with thee in an affair that nearly concerns him and this country in general, in which I shall request thee to exercise thy best thoughts, and, according to the result of these heartily to employ the necessary endeavours: the case is briefly as follows:

"This government has consisted of two parts; the province of Pennsylvania, and the three lower counties on Delaware. To the first the proprietor has a most clear and undoubted right, both for soil and government, by the king's letters patent or royal charter; for the latter he has much less to show; for the soil he has deeds of feofment from the duke of York, but for the government not so much as is necessary. After his first arrival, however, in these parts, he prevailed with the people both of the province and those counties to join in one government under him, according to the powers of the king's charter, which nevertheless extended to the province only, and so they continued, not without many fractions, till after the time of his last departure, when some disaffected persons took advantage of a clause, which he had unhappily inserted in a charter he gave the people, and broke off entirely from those lower counties; since which time we have had two assemblies, that of the province acting by a safe and indisputed power, but that of the other counties without sufficient (I doubt) to justify them. Last fall the assembly of those counties took occasion to inquire into their own powers, upon a design to set new measures on foot, and have sent home an address by one of their members, Thomas Coutts' brother, who is to negotiate the matter with the lords of trade and the ministry, to obtain powers to some person or other, who the queen may think fit (though Coutts designs it for himself) to discharge all the necessary duties of government over them. This I doubt will give the proprietary great trouble, for when the council of trade is fully apprized, as by this means they will be, that those counties are entirely disjoined from the province, it is probable they may more strictly inquire into the proprietor's right of government and legislation with the people there: and it is much to be feared that they may advise the queen to dispose of the government of those parts some other way, which would be exceedingly destructive to the interest of the province in general. * *

"Upon the whole, what I have to propose is this, whether it would not be most advisable for the proprietor to consider in time what measures are most fit for him to take for his own and the country's interest, before the blow falls so heavy that it may prove difficult, if at all practicable, for him to ward it off; whether, therefore, it may not be most prudent to part with the government of both province and lower counties together, upon the best terms that can be obtained, before it proves too late for him to procure any. If he should hold the government of the province, nay even of the whole, during his life, he will never gain any thing by it; and, after his decease, it will be lost, or at least be put out of the hands of friends, and perhaps without any previous terms at all, when now he may be capable himself to negotiate a surrender, both to his own particular interest, and greatly to the advantage of the profession; but whenever this is done, he should remember our present lieutenant-governor, who will be a sufferer (I fear at best) by undertaking the charge; and if any thing fall of course in the way, I wish he would not quite forget an old trusty servant of his, who has been drudging for him these ten years (but that is not the business.) This I thought necessary to advise thee of, considering thee as one of his best and heartiest friends, and desire thee to communicate the matter to such others as may be most serviceable, but by no means expose this letter, for I would have that kept very private. I have wrote to the same purpose to the proprietary himself very fully, but finding, by long experience, how little it avails to write to himself alone of matters relating to his own interest, I now choose this method, and give this early notice before the addresses from hence shall come to hand, which, with the addresses already gone from the lower counties, will certainly do our business whether the proprietor will agree to it or not, and therefore best take time while it offers. I shall commit this to thy prudence and discretion, and conclude, thy real loving friend,

"JAMES LOGAN."

HISTORICAL AND POLITICAL,

BEFORE THE REVOLUTION.

ALBANY PAPERS.

Containing, I. *Reasons and Motives on which the* PLAN OF UNION FOR THE COLONIES *was formed*; II. *Reasons against partial Unions*; III. *And the Plan of Union drawn by Benjamin Franklin, and unanimously agreed to by the Commissioners from New Hampshire, Massachusett's Bay, Rhode Island, New Jersey, Maryland, and Pennsylvania,* met in Congress at Albany, in July* 1754, *to consider of the best Means of defending the King's Dominions in America, &c., a War being then apprehended; with the Reasons or Motives for each Article of the Plan.*

Benjamin Franklin, was one of the four commissioners from Pennsylvania.†

I. *Reasons and Motives on which the Plan of Union was formed.*

THE commissioners from a number of the northern colonies being met at Albany, and considering the difficulties that have always attended the most necessary general measures for the common defence, or for the annoyance of the enemy, when they were to be carried through the several particular assemblies of all the colonies; some assemblies being before at variance with their governors or councils, and the several branches of the government not on terms of doing business with each other; others taking the opportunity, when their concurrence is wanted, to push for favourite laws, powers, or points, that they think could not at other times be obtained, and so creating disputes and quarrels; one assembly waiting to see what another will do, being afraid of doing more than its share, or desirous of doing less, or refusing to do any thing, because its country is not at present so much exposed as others, or because another will reap more immediate advantage; from one or other of which causes, the assemblies of six (out of seven) colonies applied to, had granted no assistance to Virginia, when lately invaded by the French, though purposely convened, and the importance of the occasion earnestly urged upon them; considering moreover, that one principal encouragement to the French, in invading and insulting the British American dominions, was their knowledge of our disunited state, and of our weakness arising from such want of union; and that from hence different colonies were, at different times, extremely harassed, and put to great expense both of blood and treasure, who would have remained in peace, if the enemy had had cause to fear the drawing on themselves the resentment and power of the whole; the said commissioners, considering also the present encroachments of the French, and the mischievous consequences that may be expected from them, if not opposed with our force, came to an unanimous resolution,—*That an union of the colonies is absolutely necessary for their preservation.*

The manner of forming and establishing this union was the next point. When it was considered, that the colonies were seldom all in equal danger at the same time, or equally near the danger, or equally sensible of it; that some of them had particular interests to manage, with which an union might interfere; and that they were extremely jealous of each other; it was thought impracticable to obtain a joint agreement of all the colonies to an union, in which the expense and burden of defending any of them should be divided among them all; and if ever acts of assembly in all the colonies could be obtained for that purpose, yet as any colony, on the least dissatisfaction, might repeal its own act and thereby withdraw itself from the union, it

* This plan was intended for all the colonies. Some of the commissioners not attending, their consent to it was not universally expressed. Governor Pownall says, "He had an opportunity of conversing with, and knowing the sentiments of the commissioners appointed by their respective provinces, to attend this congress, to which they were called by the crown; of learning from their experience and judgment, the actual state of the American business and interest; and of hearing amongst them, the grounds and reasons of that American union, which they then had under deliberation, and transmitted the plan of to England;" and he adds, in another place, "that the sentiments of our colonies were collected in an authentic manner on this subject in the plan proposed by Dr. Franklin, and unanimously agreed to in congress." See governor Pownall's Administration of the British Colonies. Vol. i. p. 13. Edit. 4. 1774, and vol. ii. 86.

† "Mr. [since governor] Hutchinson was one of the commissioners for Massachusetts' Bay." "Thomas Pownall, Esq. brother to John Pownall, Esq. one of the secretaries to the board of trade, and afterwards governor of Massachusetts, was upon the spot." History of the British Empire in North America, p. 25.

would not be a stable one, or such as could be depended on: for if only one colony should, on any disgust withdraw itself, others might think it unjust and unequal that they, by continuing in the union, should be at the expense of defending a colony, which refused to bear its proportionable part, and would therefore one after another, withdraw, till the whole crumbled into its original parts. Therefore the commissioners came to another previous resolution, viz. *That it was necessary the union should be established by act of parliament.*

They then proceeded to sketch out a *plan of union*, which they did in a plain and concise manner, just sufficient to show their sentiments of the kind of union that would best suit the circumstances of the colonies, be most agreeable to the people, and most effectually promote his majesty's service, and the general interest of the British empire. This was respectfully sent to the assemblies of the several colonies for their consideration, and to receive such alterations and improvements as they should think fit and necessary; after which it was proposed to be transmitted to England to be perfected, and the establishment of it there humbly solicited.

This was as much as the commissioners could do.*

II. *Reasons against partial Unions.*

It was proposed by some of the commissioners, to form the colonies into two or three distinct unions; but for these reasons that proposal was dropped even by those that made it: viz.

1. In all cases where the strength of the whole was necessary to be used against the enemy, there would be the same difficulty in degree, to bring the several unions to unite together, as now the several colonies; and consequently the same delays on our part and advantage to the enemy.

2. Each union would separately be weaker than when joined by the whole, obliged to exert more force, be oppressed by the expense, and the enemy less deterred from attacking it.

3. Where particular colonies have *selfish views*, as New York with regard to Indian trade and lands; or are less exposed, being covered by others, as New Jersey, Rhode Island, Connecticut, Maryland; or have particular whims and prejudices against warlike measures in general, as Pennsylvania, where the quakers predominate; such colonies would have more weight in a partial union, and be better able to oppose and obstruct the measures necessary for the general good, than where they are swallowed up in the general union.

4. The Indian trade would be better regulated by the union of the whole than by the partial unions. And as Canada is chiefly supported by that trade, if it could be drawn into the hands of the English (as it might be if the Indians were supplied on moderate terms, and by honest traders appointed by and acting for the public) that alone would contribute greatly to the weakening of our enemies.

5. The establishing of new colonies westward on the Ohio and the lakes (a matter of considerable importance to the increase of British trade and power, to the breaking that of the French, and to the protection and security of our present colonies,) would best be carried on by a joint union.

6. It was also thought, that by the frequent meetings together of commissioners or representatives from all the colonies, the circumstances of the whole would be better known, and the good of the whole better provided for; and that the colonies would by this connexion learn to consider themselves, not as so many independent states, but as members of the same body; and thence be more ready to afford assistance and support to each other, and to make diversions in favour even of the most distant, and to join cordially in any expedition for the benefit of all against the common enemy.

These were the principal reasons and motives for forming the plan of union as it stands. To which may be added this, that as the union of the———

The remainder of this article was lost.

III. *Plan of a proposed Union of the several Colonies of Massachusett's Bay, New Hampshire, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, and South Carolina, for their mutual Defence and Security, and for extending the British Settlements in North America, with the Reasons and Motives for each Article of the Plan———[as far as could be remembered.]*

It is proposed—That humble application be made for an act of parliament of Great Britain, by virtue of which one general government may be formed in America, including all the said colonies, within and under which government each colony may retain its present constitution, except in the particulars wherein a change may be directed by the said act, as hereafter follows.*

PRESIDENT-GENERAL, AND GRAND COUNCIL.

That the said general government be administered by a president-general, to be appointed and supported by the crown; and

* Dr. Davenant was so well convinced of the expediency of an union of the colonies, that he recites, at full length, a plan contrived, as he says, with good judgment for the purpose. Davenant, Vol. I. p. 40, 41 of sir C. Whitworth's edition.

* The reader may perceive, by the difference of the *Italic* and Roman type, which is the text of the plan, and which the *reasons and motives* mentioned in the title. They are thus printed for perspicuity and for convenience.

a grand council, to be chosen by the representatives of the people of the several colonies met in their respective assemblies.

It was thought that it would be best the president-general should be supported as well as appointed by the crown; that so all disputes between him and the grand council concerning his salary might be prevented; as such disputes have been frequently of mischievous consequence in particular colonies, especially in time of public danger. The quit-rents of crown-lands in America might in a short time be sufficient for this purpose.—The choice of members for the grand council is placed in the house of representatives of each government, in order to give the people a share in this new general government, as the crown has its share by the appointment of the president-general.

But it being proposed by the gentlemen of the council of New York, and some other counsellors among the commissioners, to alter the plan in this particular, and to give the governors and council of the several provinces a share in the choice of the grand council, or at least a power of approving and confirming, or of disallowing the choice made by the house of representatives, it was said:

"That the government or constitution proposed to be formed by the plan, consists of two branches; a president-general appointed by the crown, and a council chosen by the people, or by the people's representatives, which is the same thing.

"That by a subsequent article, the council chosen by the people can effect nothing without the consent of the president-general appointed by the crown; the crown possesses therefore full one half of the power of this constitution.

"That in the British constitution, the crown is supposed to possess but one third, the lords having their share.

"That this constitution seemed rather more favourable for the crown.

"That it is essential to English liberty, that the subject should not be taxed but by his own consent, or the consent of his elected representatives.

"That taxes to be laid and levied by this proposed constitution will be proposed and agreed to by the representatives of the people, if the plan in this particular be preserved:

"But if the proposed alteration should take place, it seemed as if matters may be so managed, as that the crown shall finally have the appointment not only of the president-general, but of a majority of the grand council; for seven out of eleven governors and councils are appointed by the crown:

"And so the people in all the colonies would in effect be taxed by their governors.

"It was therefore apprehended, that such alterations of the plan would give great dissatisfaction, and that the colonies could not be easy under such a power in governors, and such an infringement of what they take to be English liberty,

"Besides, the giving a share in the choice of the grand council would not be equal with respect to all the colonies as their constitutions differ. In some, both governor and council are appointed by the crown. In others, they are both appointed by the proprietors. In some, the people have a share in the choice of the council; in others, both government and council are wholly chosen by the people. But the house of representatives is every where chosen by the people; and therefore, placing the right of choosing the grand council in the representatives is equal with respect to all.

"That the grand council is intended to represent all the several houses of representatives of the colonies, as a house of representatives doth the several towns or counties of a colony. Could all the people of a colony be consulted and unite in public measures, a house of representatives would be needless, and could all the assemblies conveniently consult and unite in general measures, the grand council would be unnecessary.

"That a house of commons or the house of representatives, and the grand council, are thus alike in their nature and intention. And as it would seem improper that the king or house of lords should have a power of disallowing or appointing members of the house of commons;—so likewise, that a governor and council appointed by the crown should have a power of disallowing or appointing members of the grand council (who, in this constitution, are to be the representatives of the people.)

"If the governors and councils therefore were to have a share in the choice of any that are to conduct this general government, it should seem more proper that they choose the president-general. But this being an office of great trust and importance to the nation, it was thought better to be filled by the immediate appointment of the crown.

"The power proposed to be given by the plan to the grand council is only a concentration of the powers of the several assemblies in certain points for the general welfare; as the power of the president-general, is of the powers of the several governors in the same points.

"And as the choice therefore of the grand council, by the representatives of the people, neither gives the people any new powers, nor diminishes the power of the crown, it was thought and hoped the crown would not disapprove of it."

Upon the whole, the commissioners were of opinion, that the choice was most properly placed in the representatives of the people.

ELECTION OF MEMBERS.

That within months after the passing such act, the house of representatives, that happen to be sitting within that time, or that shall be especially for that purpose convened, may and shall choose members for the grand council, in the following proportion, that is to say,

Massachusett's Bay,	7
New Hampshire,	2
Connecticut,	5
Rhode Island,	2
New York,	4
New Jersey,	3
Pennsylvania,	6
Maryland,	4
Virginia,	7
North Carolina,	4
South Carolina,	4
	48

It was thought, that if the least colony was allowed two, and the others in proportion, the number would be very great, and the expense heavy; and that less than two would not be convenient, as a single person, being by any accident prevented appearing at the meeting, the colony he ought to appear for would not be represented. That as the choice was not immediately popular, they would be generally men of good abilities for business, and men of reputation for integrity; and that forty-eight such men might be a number sufficient. But, though it was thought reasonable, that each colony should have a share in the representative body in some degree, according to the proportion it contributed to the general treasury: yet the proportion of wealth or power of the colonies is not to be judged by the proportion here fixed; because it was at first agreed, that the greatest colony should not have more than seven members, nor the least less than two: and the setting these proportions between these two extremes was not nicely attended to, as it would find itself, after the first election from the sums brought into the treasury, as by a subsequent article.

PLACE OF FIRST MEETING.

—who shall meet for the first time at the city of Philadelphia in Pennsylvania, being called by the president-general as soon as conveniently may be after his appointment.

Philadelphia was named as being the nearer the centre of the colonies, where the commissioners would be well and cheaply accommodated. The high-roads, through the whole extent, are for the most part very good, in which forty or fifty miles a day may very well be and frequently are travelled. Great part of the way may likewise be gone by water. In summer time, the passages are frequently performed in a week from Charleston to Philadelphia and New York; and from Rhode Island to New York through the sound, in two or three days; and from New York to Philadelphia, by water and land, in two days, by stage boats and wheel carriages that set out every other day. The journey from Charleston to Philadelphia may likewise be facilitated by boats running up Chesapeake bay three hundred miles. But if the whole journey be performed on horseback, the most distant members (viz. the two from New Hampshire and from South Carolina) may probably render themselves at Philadelphia in fifteen or twenty days; the majority may be there in much less time.

NEW ELECTION.

That there shall be a new election of the members of the grand council every three years; and on the death or resignation of any member, his place should be supplied by a new choice at the next sitting of the assembly of the colony he represented.

Some colonies have annual assemblies, some continue during a governor's pleasure; three years was thought a reasonable medium, as affording a new member time to improve himself in the business, and to act after such improvement; and yet giving opportunities, frequently enough, to change him, if he has misbehaved.

PROPORTION OF MEMBERS AFTER THE FIRST THREE YEARS.

That after the first three years, when the proportion of money arising out of each colony to the general treasury can be known, the number of members to be chosen for each colony shall from time to time, in all ensuing elections, be regulated by that proportion (yet so as that the number to be chosen by any one province be not more than seven, nor less than two.)

By a subsequent article it is proposed, that the general council shall lay and levy such general duties, as to them may appear most equal and least burdensome, &c. Suppose, for instance, they lay a small duty or excise on some commodity imported into or made in the colonies, and pretty generally and equally used in all of them; as rum perhaps, or wine: the yearly produce of this duty or excise, if fairly collected, would be in some colonies greater, in others less, as the colonies are greater or smaller. When the collector's accounts are brought in, the proportions will appear; and from them its proposed to regulate the proportion of representatives to be chosen at the next general election, within the limits however of seven and two. These numbers may therefore vary in course of years, as the colonies may in the growth and

increase of people. And thus the quota of tax from each colony would naturally vary with its circumstances; thereby preventing all disputes and dissatisfaction about the just proportions due from each; which might otherwise produce pernicious consequences, and destroy the harmony and good agreement that ought to subsist between the several parts of the union.

MEETINGS OF THE GRAND COUNCIL, AND CALL.

That the grand council shall meet once in every year, and oftener if occasion require, at such time and place as they shall adjourn to at the last preceding meeting, or as they shall be called to meet at by the president-general on any emergency; he having first obtained in writing the consent of seven of the members to such call, and sent due and timely notice to the whole.

It was thought, in establishing and governing new colonies or settlements, regulating Indian trade, Indian treaties, &c. there would be every year sufficient business arise to require at least one meeting, and at such meeting many things might be suggested for the benefit of all the colonies. This annual meeting may either be at a time or place certain, to be fixed by the president-general and grand council at their first meeting; or left at liberty, to be at such time and place as they shall adjourn to, or be called to meet at by the president-general.

In time of war it seems convenient, that the meeting should be in that colony which is nearest the seat of action.

The power of calling them on any emergency seemed necessary to be vested in the president-general; but that such power might not be wantonly used to harass the members, and oblige them to make frequent long journies to little purpose, the consent of seven at least to such call was supposed a convenient guard.

CONTINUANCE.

That the grand council have power to choose their speaker; and shall neither be dissolved, prorogued, nor continued sitting longer than six weeks at one time, without their own consent or the special command of the crown.

The speaker should be presented for approbation; it being convenient, to prevent misunderstandings and disgusts, that the mouth of the council should be a person agreeable, if possible, both to the council and president-general.

Governors have sometimes wantonly exercised the power of proroguing or continuing the sessions of assemblies, merely to harass the members and compel a compliance; and sometimes dissolve them on slight disgusts. This it was feared might be done by the president-general, if not provided against: and the inconvenience and hardship would be greater in the general government than in particular colonies, in proportion to the distance the members must be from home, during sittings, and the long journies some of them must necessarily take.

MEMBERS' ALLOWANCE

That the members of the grand council shall be allowed for their service ten shillings sterling per diem, during their session and journey to and from the place of meeting; twenty miles to be reckoned a day's journey.

It was thought proper to allow *some* wages, lest the expense might deter some suitable persons from the service;—and not to allow *too great* wages, lest unsuitable persons should be tempted to cabal for the employment, for the sake of gain. Twenty miles was set down as a day's journey, to allow for accidental hindrances on the road, and the greater expenses of travelling than residing at the place of meeting.

ASSENT OF PRESIDENT-GENERAL AND HIS DUTY.

That the assent of the president-general be requisite to all acts of the grand council; and that it be his office and duty to cause them to be carried into execution.

The assent of the president-general to all acts of the grand council was made necessary, in order to give the crown its due share of influence in this government, and connect it with that of Great Britain. The president-general, besides one half of the legislative power, hath in his hands the whole executive power.

POWER OF PRESIDENT-GENERAL AND GRAND COUNCIL: TREATIES OF PEACE AND WAR.

That the president-general, with the advice of the grand council, hold or direct all Indian treaties, in which the general interest of the colonies may be concerned; and make peace or declare war with Indian nations.

The power of making peace or war with Indian nations is at present supposed to be in every colony, and is expressly granted to some by charter, so that no new power is hereby intended to be granted to the colonies. But as, in consequence of this power, one colony might make peace with a nation that another was justly engaged in war with; or make war on slight occasions without the concurrence or approbation of neighbouring colonies, greatly endangered by it; or make particular treaties of neutrality in case of a general war, to their own private advantage in trade, by supplying the common enemy; of all which there have been instances—it was thought better, to have all treaties of a

general nature under a general direction; that so the good of the whole may be consulted and provided for.

INDIAN TRADE.

That they make such laws as they judge necessary for regulating all Indian trade.

Many quarrels and wars have arisen between the colonies and Indian nations, through the bad conduct of traders who cheat the Indians after making them drunk, &c. to the great expense of the colonies, both in blood and treasure. Particular colonies are so interested in the trade, as not to be willing to admit such a regulation as might be best for the whole; and therefore it was thought best under a general direction.

INDIAN PURCHASES.

That they make all purchases, from Indians for the crown, of lands not now within the bounds of particular colonies, or that shall not be within their bounds when some of them are reduced to more convenient dimensions.

Purchases from the Indians, made by private persons, have been attended with many inconveniences. They have frequently interfered, and occasioned uncertainty of titles, many disputes and expensive law-suits, and hindered the settlement of the land so disputed. Then the Indians have been cheated by such private purchases, and discontent and wars have been the consequence. These would be prevented by public fair purchases.

Several of the colony charters in America extend their bounds to the South Sea, which may be perhaps three or four thousand miles in length to one or two hundred miles in breadth. It is supposed they must in time be reduced to dimensions more convenient for the common purposes of government.*

Very little of the land in those grants is yet purchased of the Indians.

It is much cheaper to purchase of them, than to take and maintain the possession by force: for they are generally very reasonable in their demands for land;* and the expense of guarding a large frontier against their incursions is vastly great; because all must be guarded, and always guarded, as we know not where or when *to expect them.*†

NEW SETTLEMENTS.

That they make new settlements on such purchases, by granting lands in the king's name, reserving a quit-rent to the crown for the use of the general treasury.

It is supposed better that there should be one purchaser than many; and that the crown should be that purchaser, or the union in the name of the crown. By this means the bargains may be more easily made, the price not enhanced by numerous bidders, future disputes about private Indian purchases, and monopolies of vast tracts to particular persons (which are prejudicial to the settlement and peopling of the country) prevented; and the land being again granted in small tracts to the settlers, the quit-rents reserved may in time become a fund for support of government; for defence of the country, ease of taxes, &c.

Strong forts on the lakes, the Ohio, &c. may, at the same time they secure our present frontiers, serve to defend new colonies settled under their protection; and such colonies would also mutually defend and support such forts, and better secure the friendship of the far Indians.

A particular colony has scarce strength enough to extend itself by new settlements, at so great a distance from the old: but the joint force of the union might suddenly esta-

* Baron Meseares, in his account of the Proceedings at Quebec, for obtaining an Assembly, says, "The vast enlargement of the province of Quebec, by adding to it a new territory that contains, according to lord Hillsborough's estimation of it, five hundred and eleven millions of acres (that is, more land than Spain, Italy, France, and Germany put together, and most of it good land) is a measure that would require an ample discussion."—The motives assigned by the act regulating the government of Quebec, are here quoted—"By the arrangements made by the royal proclamation, a very large extent of [outlying] country, within which there are several colonies and settlements of the subjects of France, who claimed to remain therein under the faith of the said treaty, was left without any provision being made for the administration of civil government therein: i. e. a few Indian traders were a pretext for this appropriation of a tract of country, which, according to the minister's estimate, was more than thirteen times larger than England and Wales united, nearly one hundred and twenty-eight times larger than Jamaica, almost one eighth part of Europe, and considerably more than one thirty-eighth part of the whole habitable earth. "Now *all* the inhabitants of the province of Quebec," says this act, "amounted at the conquest to above sixty-five thousand [only,] professing the religion of the church of Rome, and enjoying an established form of constitution and system of laws."

* "Dr. Franklin (says Mr. Kalm the Swede,) and several other gentlemen, frequently told me, that a powerful Indian, who possessed Rhode Island, had sold it to the English for a pair of spectacles; it is large enough for a prince's domain, and makes a peculiar government at present." See Kalm's Travels into North America, Vol. I. p 386, 387. "At the time when the Swedes first arrived, they bought land at a very inconsiderable price. For a piece of baize, or a pot full of brandy, or the like, they could get a piece of ground which at present would be worth more than 200*l.* sterling." Ib. vol. II. p. 118.—The truth is, that the Indians considered their lands as mere *hunting manors*, and not as farms.

† To guard against the incursions of the Indians, a plan was sent over to America, it was said by authority, suggesting the expediency of clearing away the woods and bushes from a tract of land, *a mile in breadth*, and extending along the back of the colonies. Unfortunately, besides the large expense of the undertaking (which, if one acre cost 2*l.* sterling, and six hundred and forty acres make a square mile, is 128,000*l. first cost* for every hundred miles) it was forgotten, that the Indians, like other people, knew the difference between *day and night*, and that a mile of advance and another of retreat were nothing to the celerity of such an enemy.—This plan, was the work of Tucker, dean of Gloucester, a conspicuous writer on American affairs, before and during the revolution.

blish a new colony or two in those parts, or extend an old colony to particular passes, greatly to the security of our present frontiers, increase of trade and people, breaking off the French communication between Canada and Louisiana, and speedy settlement of the intermediate lands.

The power of settling new colonies is therefore thought a valuable part of the plan, and what cannot so well be executed by two unions as by one.

LAWS TO GOVERN THEM.

That they make laws for regulating and governing such new settlements, till the crown shall think fit to form them into particular governments.

The making of laws suitable for the new colonies, it was thought, would be properly vested in the president-general and grand council; under whose protection they must at first necessarily be, and who would be well acquainted with their circumstances, as having settled them. "When they are become sufficiently populous, they may by the crown be formed into complete and distinct governments.

The appointment of a sub-president by the crown, to take place in case of the death or absence of the president-general, would perhaps be an improvement of the plan; and if all the governors of particular provinces were to be formed into a standing council of state, for the advice and assistance of the president-general, it might be another considerable improvement.

RAISE SOLDIERS, AND EQUIP VESSELS, &c.

That they raise and pay soldiers and build forts for the defence of any of the colonies, and equip vessels of force to guard the coasts and protect the trade on the ocean, lakes, or great rivers; but they shall not impress men in any colony without the consent of the legislature.*

It was thought, that quotas of men, to be raised and paid by the several colonies, and joined for any public service, could not always be got together with the necessary expedition. For instance, suppose one thousand men should be wanted in New Hampshire on any emergency; to fetch them by fifties and hundreds out of every colony, as far as South Carolina, would be inconvenient, the transportation chargeable, and the occasion perhaps passed before they could be assembled; and therefore that it would be best to raise them (by offering bounty-money and pay) near the place where they would be wanted, to be discharged again when the service should be over.

* "According to a plan which had been proposed by governor Pownall, and approved of by congress."—Administration of the Colonies, vol. ii. p. 148.

Particulur colonies are at present backward to build forts at their own expense, which they say will be equally useful to their neighbouring colonies; who refuse to join, on a presumption that such forts *will* be built and kept up, though they contribute nothing. This unjust conduct weakens the whole; but the forts being for the good of the whole, it was thought best they should be built and maintained by the whole, out of the common treasury.

In the time of war, small vessels of force are sometimes necessary in the colonies to scour the coast of small privateers. These being provided by the union will be an advantage in turn to the colonies which are situated on the sea, and whose frontiers on the land-side, being covered by other colonies, reap but little immediate benefit from the advanced forts.

POWER TO MAKE LAWS, LAY DUTIES, &c.

That for these purposes they have power to make laws, and lay and levy such general duties, imports, or taxes, as to them shall appear most equal and just (considering the ability and other circumstances of the inhabitants in the several colonies,) and such as may be collected with the least inconvenience to the people; rather discouraging luxury, than loading industry with unnecessary burdens.

The laws which the president-general and grand council are impowered to make are *such only* as shall be necessary for the government of the settlements; the raising, regulating, and paying soldiers for the general service; the regulating of Indian trade; and laying and collecting the general duties and taxes. (They should also have a power to restrain the exportation of provisions to the enemy from any of the colonies, on particular occasions, in time of war.) But is it not intended that they may interfere with the constitution and government of the particular colonies; who are to be left to their own laws, and to lay, levy, and apply their own taxes as before.

GENERAL TREASURER AND PARTICULAR TREASURER.

That they may appoint a general treasurer and particular treasurer in each government, when necessary; and from time to time may order the sums in the treasuries of each government into the general treasury; or draw on them for special payments, as they find most convenient.

The treasurers here meant are only for the general funds, and not for the particular funds of each colony, which remain in the hands of their own treasurers at their own disposal.

MONEY HOW TO ISSUE.

Yet no money to issue but by joint orders

of the president-general and grand council; except where sums have been appropriated to particular purposes, and the president-general is previously impowered by an act to draw such sums.

To prevent misapplication of the money, or even application that might be dissatisfactory to the crown or the people, it was thought necessary, to join the president-general and grand council in all issues of money.

ACCOUNTS.

That the general accounts shall be yearly settled and reported to the several assemblies.

By communicating the accounts yearly to each assembly, they will be satisfied of the prudent and honest conduct of their representatives in the grand council.

QUORUM.

That a quorum of the grand council, impowered to act with the president-general, do consist of twenty-five members; among whom there shall be one or more from a majority of the colonies.

The quorum seems large, but it was thought it would not be satisfactory to the colonies in general, to have matters of importance to the whole transacted by a smaller number, or even by this number of twenty-five, unless there were among them one at least from a majority of the colonies; because otherwise, the whole quorum being made up of members from three or four colonies at one end of the union, something might be done that would not be equal with respect to the rest, and thence dissatisfaction and discords might rise to the prejudice of the whole.

LAWS TO BE TRANSMITTED.

That the laws made by them for the purposes aforesaid shall not be repugnant, but, as near as may be, agreeable to the laws of England, and shall be transmitted to the king in council for approbation, as soon as may be after their passing; and if not disapproved within three years after presentation, to remain in force.

This was thought necessary for the satisfaction of the crown, to preserve the connexion of the parts of the British empire with the whole, of the members with the head, and to induce greater care and circumspection in making of the laws, that they be good in themselves and for the general benefit.

DEATH OF THE PRESIDENT-GENERAL.

That in case of the death of the president-general, the speaker of the grand council for the time being shall succeed, and be vested with the same powers and authorities, to continue till the king's pleasure be known.

It might be better, perhaps, as was said before, if the crown appointed a vice-president, to take place on the death or absence of the president-general: for so we should be more sure of a suitable person at the head of the colonies. On the death or absence of both, the speaker to take place (or rather the eldest king's-governor) till his majesty's pleasure be known.

OFFICERS HOW APPOINTED.

That all military commission officers, whether for land or sea service, to act under this general constitution, shall be nominated by the president-general; but the approbation of the grand council is to be obtained before they receive their commissions. And all civil officers are to be nominated by the grand council, and to receive the president-general's approbation before they officiate.

It was thought it might be very prejudicial to the service, to have officers appointed unknown to the people, or unacceptable, the generality of Americans serving willingly under officers they know: and not caring to engage in the service under strangers, or such as are often appointed by governors through favour or interest. The service here meant, is not the stated settled service in standing troops; but any sudden and short service, either for defence of our colonies, or invading the enemy's country; (such as, the expedition to Cape Breton in the last war; in which many substantial farmers and tradesmen engaged as common soldiers, under officers of their own country, for whom they had an esteem and affection; who would not have engaged in a standing army, or under officers from England.) It was therefore thought best, to give the council the power of approving the officers, which the people will look upon as a great security of their being good men. And without some such provision as this, it was thought the expense of engaging men in the service on any emergency would be much greater, and the number who could be induced to engage much less; and that therefore it would be most for the king's service and general benefit of the nation, that the prerogative should relax a little in this particular throughout all the colonies in America; as it had already done much more in the charters of some particular colonies, viz. Connecticut and Rhode Island.

The civil officers will be chiefly treasurers and collectors of taxes; and the suitable persons are most likely to be known by the council.

VACANCIES HOW SUPPLIED.

But in case of vacancy by death, or removal of any officer civil or military under this constitution, the governor of the province in which such vacancy happens may appoint,

till the pleasure of the president-general and grand council can be known.

The vacancies were thought best supplied by the governor in each province, till a new appointment can be regularly made; otherwise the service might suffer before the meeting of the president-general and grand council.

EACH COLONY MAY DEFEND ITSELF ON EMERGENCY, &c.

That the particular military as well as civil establishments in each colony remain in their present state, the general constitution notwithstanding; and that on sudden emergencies any colony may defend itself, and lay the accounts of expense thence arising before the president-general and general council, who may allow and order payment of the same, as far as they judge such accounts just and reasonable.

Otherwise the union of the whole would weaken the parts, contrary to the design of the union. The accounts are to be judged of by the president-general and grand council, and allowed if found reasonable: this was thought necessary to encourage colonies to defend themselves, as the expense would be light when borne by the whole; and also to check imprudent and lavish expense in such defences.*

ALBANY PAPERS—*continued.*

I. *Letter to governor Shirley, concerning the Imposition of direct Taxes upon the Colonies, without their consent.*†

Tuesday morning.

SIR,—I return you the loose sheets of the plan, with thanks to your excellency for communicating them.

I apprehend, that excluding the people of the colonies from all share in the choice of the grand council will give extreme dissatisfaction; as well as the taxing them by act of parliament, where they have no representation. It is very possible, that this general government might be as well and faithfully administered without the people, as with them; but where heavy burdens are to be laid upon them, it has been found useful, to make it as much as possible their own act; for they bear better, when they have, or think they have, some share in the direction; and when any public measures are generally grievous, or even distasteful, to the people, the wheels of government move more heavily.

II. *Letter to the same; concerning direct Taxes in the Colonies imposed without consent, indirect Taxes, and the Albany Plan of Union.*

Wednesday morning.

SIR,—I mentioned it yesterday to your excellency as my opinion, that excluding the people of the colonies from all share in the choice of the grand council would probably give extreme dissatisfaction, as well as the taxing them by act of parliament, where they have no representation. In matters of general concern to the people, and especially where burdens are to be laid upon them; it is of use to consider, as well what they will be apt to think and say, as what they ought to think: I shall therefore, as your excellency requires it of me, briefly mention what of either kind occurs to me on this occasion.

First, they will say, and perhaps with justice, that the body of the people in the colonies are as loyal, and as firmly attached to the present constitution, and reigning family, as any subjects in the king's dominions.

That there is no reason to doubt the readiness and willingness of the representatives they may choose, to grant from time to time such supplies for the defence of the country, as shall be judged necessary, so far as their abilities will allow.

That the people in the colonies, who are to feel the immediate mischiefs of invasion and conquest by an enemy, in the loss of their estates, lives, and liberties, are likely to be better judges of the quantity of forces necessary to be raised and maintained, forts to be built and supported, and of their own abilities to bear the expense than the p[illegible] of England, at so great a distance.

That governors often come to the colonies merely to make fortunes, with which they intend to return to Britain; are not always men of the best abilities or integrity; have many of them no estates here, nor any natural

* This plan of union was rejected, and another proposed by the English minister, which had for its object, taking power from the *people* in the colonies, in order to give it to the *crown*.

† These letters to governor Shirley first appeared in the London Chronicle for Feb. 6—8, 1766, with an introduction signed *A Lover of Britain*. In the beginning of the year 1776, they were republished in Almon's Remembrancer, with an additional prefatory piece, under the signature of *A Mourner over our Calamities*.—The subject of them in the words of one of these writers is as follows: "The Albany Plan of Union was sent to the government here for approbation: had it been approved and established by authority from hence, English America thought itself sufficiently able to cope with the French, without other assistance; several of the colonies having alone, in former wars, withstood their whole power, unassisted not only by the mother-country, but by any of the neighbouring provinces—The plan, however, was not approved here; a *New one* was formed instead of it; which proposed, that "the governors of all the colonies, attended by one or two members of their respective councils, should assemble, and concert measures for the defence of the whole, erect forts where they judged proper, and raise what troops they thought necessary, with power to draw on the treasury here for the sums that should be wanted, and the treasury to be reimbursed by a *tax laid on the colonies by act of parliament*"—This *New Plan* being communicated by governor Shirley to Dr. Franklin then in Boston, and produced this correspondence.

connexions with us, that should make them heartily concerned for our welfare; and might possibly be fond of raising and keeping up more forces than necessary, from the profits accruing to themselves, and to make provision for their friends and dependents.

That the counsellors in most of the colonies, being appointed by the crown, on the recommendation of governors, are often persons of small estates, frequently dependent on the governors for offices, and therefore too much under influence.

That there is therefore great reason to be jealous of a power, in such governors and councils, to raise such sums as they shall judge necessary, by drafts on the lords of the treasury, to be afterwards laid on the colonies by act of parliament, and paid by the people here; since they might abuse it, by projecting useless expeditions, harassing the people, and taking them from their labour to execute such projects, merely to create offices and employments, and gratify their dependents, and divide profits.

That the parliament of England is at a great distance, subject to be misinformed and misled by such governors and councils, whose united interests might probably secure them against the effect of any complaint from hence.

That it is supposed an undoubted right of Englishmen, not to be taxed but by their own consent, given through their representatives.

That the colonies have no representatives in parliament.

That to propose taxing them by parliament, and refuse them the liberty of choosing a representative council, to meet the colonies, and consider and judge of the necessity of any general tax, and the quantum, shows a suspicion of their loyalty to the crown, or of their regard for their country, or of their common sense and understanding; which they have not deserved.

That compelling the colonies to pay money without their consent, would be rather like raising contributions in an enemy's country, than taxing of Englishmen for their own public benefit.

That it would be treating them as a conquered people, and not as true British subjects.

That a tax laid by the representatives of the colonies might be easily lessened as the occasion should lessen; but being once laid by parliament under the influence of the representations made by governors, would probably be kept up, and continued for the benefit of governors; to the grievous burden and discontentment of the colonies, and prevention of their growth and increase.

That a power in governors, to march the inhabitants from one end of the British and French colonies to the other, being a country of at least one thousand five hundred miles long, without the approbation or the consent of their representatives first obtained to such expeditions, might be grievous and ruinous to the people, and would put them upon a footing with the subjects of France in Canada, that now groan under such oppression from their governor, who for two years past has harassed them with long and destructive marches to Ohio.

That if the colonies in a body may be well governed by governors and councils appointed by the crown, without representatives; particular colonies may as well, or better be so governed; a tax may be laid upon them all by act of parliament for support of government; and their assemblies may be dismissed as an useless part of the constitution.

That the powers proposed by the Albany plan of union, to be vested in a grand council representative of the people, even with regard to military matters, are not so great, as those which the colonies of Rhode Island and Connecticut are entrusted with by their charters, and have never abused; for by this plan, the president-general is appointed by the crown, and controls all by his negative; but in those governments, the people choose the governor, and yet allow him no negative.

That the British colonies bordering on the French are properly frontiers of the British empire; and the frontiers of an empire are properly defended at the joint expense of the body of the people in such empire:—it would now be thought hard by act of parliament to oblige the Cinque Ports or sea coasts of Britain, to maintain the whole navy, because they are more immediately defended by it, not allowing them at the same time a vote in choosing members of the parliament; and, as the frontiers of America bear the expense of their own defence, it seems hard to allow them no share in voting the money, judging of the necessity and sum, or advising the measures.

That besides the taxes necessary for the defence of the frontiers, the colonies pay yearly great sums to the mother country unnoticed:—for 1. Taxes paid in Britain by the landholder or artificer must enter into and increase the price of the produce of land and manufactures made of it; and great part of this is paid by consumers in the colonies, who thereby pay a considerable part of the British taxes.

2. We are restrained in our trade with foreign nations; and where we could be supplied with any manufacture cheaper from them, but must buy the same dearer from Britain, the difference of price is a clear tax to Britain.

3. We are obliged to carry a great part of our produce directly to Britain; and where the duties laid upon it lessen its price to the planter, or it sells for less than it would in foreign markets, the difference is a tax paid to Britain.

4. Some manufactures we could make, but are forbidden and must take them of British

merchants: the whole price is a tax paid to Britain.

5. By our greatly increasing the demand and consumption of British manufactures, their price is considerably raised of late years; the advantage is clear profit to Britain, and enables its people better to pay great taxes; and much of it being paid by us, is clear tax to Britain.

6. In short, as we are not suffered to regulate our trade, and restrain the importation and consumption of British superfluities (as Britain can the consumption of foreign superfluities) our whole wealth centres finally amongst the merchants and inhabitants of Britain; and if we make them richer, and enable them better to pay their taxes, it is nearly the same as being taxed ourselves, and equally beneficial to the crown.

These kind of secondary taxes, however, we do not complain of, though we have no share in the laying or disposing of them: but to pay immediate heavy taxes, in the laying, appropriation, and disposition of which, we have no part, and which perhaps we may know to be as unnecessary as grievous, must seem hard measures to Englishmen, who cannot conceive, that by hazarding their lives and fortunes in subduing and settling new countries, extending the dominion, and increasing the commerce of the mother nation, they have forfeited the native rights of Britons; which they think ought rather to be given to them, as due to such merit, if they had been before in a state of slavery———

These, and such kinds of things as these, I apprehend, will be thought and said by the people, if the proposed alteration of the Albany plan should take place. Then the administration of the board of governors' and council so appointed, not having the representative body of the people to approve and unite in its measures, and conciliate the minds of the people to them, will probably become suspected and odious; dangerous animosities and feuds will arise between the governors and governed; and every thing go into confusion.

Perhaps I am too apprehensive in this matter; but having freely given my opinion and reasons, your excellency can judge better than I, whether there be any weight in them, and the shortness of the time allowed me will I hope in some degree excuse the imperfections of this scrawl.

With the greatest respect and fidelity, I have the honour to be . B. FRANKLIN.

III. *Letter on the subject of uniting the Colonies more intimately with Great Britain, by Representatives in Parliament.*

Boston, Dec. 22, 1754.

Sir,—Since the conversation your excellency was pleased to honour me with, on the subject of *uniting the colonies* more intimately with Great Britain, by allowing them *representatives in parliament*, I have something further considered that matter, and am of opinion, that such an union would be very acceptable to the colonies, provided they had a reasonable number of representatives allowed them; and that all the old acts of parliament restraining the trade or cramping the manufactures of the colonies be at the same time repealed, and the British subjects *on this side the water* put, in those respects, on the same footing with those in Great Britain, till the new parliament, representing the whole, shall think it for the interest of the whole to re-enact some or all of them: it is not that I imagine so many representatives will be allowed the colonies, as to have any great weight by their numbers; but I think there might be sufficient to occasion those laws to be better and more impartially considered, and perhaps to overcome the interest of a petty corporation, or of any particular set of artificers or traders in England, who heretofore seem, in some instances, to have been more regarded than all the colonies, or than was consistent with the general interest, or best natural good. I think too, that the government of the colonies by a parliament, in which they are fairly represented, would be vastly more agreeable to the people, than the method lately attempted to be introduced by royal instruction; as well as more agreeable to the nature of an English constitution, and to English liberty; and that such laws, as now seem to bear hard on the colonies, would (when judged by such a parliament for the best interest of the whole) be more cheerfully submitted to, and more easily executed.

I should hope too, that by such an union, the people of Great Britain, and the people of the colonies would learn to consider themselves, as not belonging to different communities with different interests, but to one community with one interest; which I imagine would contribute to strengthen the whole, and greatly lessen the danger of future separations.

It is, I suppose, agreed to be the general interest of any state, that its people be numerous and rich; men enow to fight in its defence, and enow to pay sufficient taxes to defray the charge; for these circumstances tend to the security of the state, and its protection from foreign power. But it seems not of so much importance, whether the fighting be done by John or Thomas, or the tax paid by William or Charles. The iron manufacture employs and enriches British subjects, but is it of any importance to the state, whether the manufacturer lives at Birmingham or Sheffield, or both; since they are still within its bounds, and their wealth and persons still at

its command? Could the Goodwin Sands be laid dry by banks, and land equal to a large county thereby gained to England, and presently filled with English inhabitants, would it be right to deprive such inhabitants of the common privileges enjoyed by other Englishmen, the right of vending their produce in the same ports, or of making their own shoes; because a merchant or a shoemaker, living on the old land, might fancy it more for his advantage to trade or make shoes for them? Would this be right even if the land were gained at the expense of the state? And would it not seem less right, if the charge and labour of gaining the additional territory to Britain had been borne by the settlers themselves? And would not the hardships appear yet greater, if the people of the new county should be allowed no representatives in the parliament enacting such impositions? Now I look on the colonies as so many counties gained to Great Britain, and more advantageous to it, than if they had been gained out of the seas around its coasts, and joined to its lands; for being in different climates, they afford greater variety of produce, and materials for more manufactures; and being separated by the ocean, they increase much more its shipping and seamen: and, since they are all included in the British empire, which has only extended itself by their means; and the strength and wealth of the parts is the strength and wealth of the whole; what imports it to the general state, whether a merchant, a smith, or a hatter, grows rich in Old or New England? and if, through increase of the people, two smiths are wanted for one employed before, why may not the *new* smith be allowed to live and thrive in the *new* country, as well as the *old* one in the *old?* In fine, why should the countenance of a state be *partially* afforded to its people, unless it be most in favour of those who have most merit? And if there be any difference, those who have most contributed to enlarge Britain's empire and commerce, increase her strength, her wealth, and the numbers of her people, at the risk of their own lives and private fortunes in new and strange countries, methinks ought rather to expect some preference. With the greatest respect and esteem, I have the honour to be, your excellency's most obedient and humble servant,

B. FRANKLIN.

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*Plan for settling two Western Colonies in North America, with Reasons for the Plan, 1754.**

THE great country back of the Apalachian mountains, on both sides the Ohio, and between that river and the lakes is now well known, both to the English and French, to be one of the finest in North America, for the extreme richness and fertility of the land; the healthy temperature of the air, and mildness of the climate; the plenty of hunting, fishing, and fowling; the facility of trade with the Indians; and the vast convenience of inland navigation or water-carriage by the lakes and great rivers, many hundred of leagues around.

From these natural advantages it must undoubtedly (perhaps in less than another century) become a populous and powerful dominion; and a great accession of power either to England or France.

The French are now making open encroachments on these territories, in defiance of our known rights; and, if we longer delay to settle that country, and suffer them to possess it,—these *inconveniences and mischiefs* will probably follow:

1. Our people, being confined to the coun-

* This plan was given to governor Pownall, 1754, for the purpose of being inserted in his memorial.

" *Extract of a Memorial drawn up by order of, and presented to, his royal highness the duke of Cumberland, 1756, by T. Pownall.*

" In other parts of our frontier, that are not the immediate residence and country of Indians, some other species of barrier should be thought of for which nothing can be more effectual than a barrier colony: but even this cannot be carried——————into execution and effect, without the previous measure of *entrepots* in the country between us and the enemy——————All mankind must know, that no body of men, whether as an army, or as an emigration of colonists, can march from one country to another, through an inhospitable wilderness, without magazines; nor with any safety, without posts communicating among each other by practicable roads, to which to retire in case of accidents, repulse, or delay.

" It is a fact, which experience evinces the truth of, that we have always been able to outsettle the French; and have driven the Indians out of the country more by settling than fighting; and that whenever our settlements have been wisely and completely made, the French, neither by themselves nor their dogs of war, the Indians, have been able to remove us. It is upon this fact I found the propriety of the measure of settling a barrier colony in those parts of our frontiers, *which are not the immediate residence or hunting grounds of our* Indians. This is a measure that will be effectual; and will not only in time pay its expense, but make as great returns as any of our present colonies do; will give strength and unity to our dominions in North America; and give us possession of our country, as well as settlement in it. But above all this, the state and circumstances of our settlements render such a measure not only proper and eligible, but absolutely necessary. The English settlements, as they are at present circumstanced, are absolutely at a stand; they are settled up to the mountains; and in the mountains there is no where together land sufficient for a settlement large enough to subsist by itself, and to defend itself, and preserve a communication with the present settlements.

" If the English would advance one step further, or cover themselves where they are, it must be at once, by one large step over the mountains, with a numerous and military colony. Where such should be settled, I do not take upon me to say; at present I shall only point out the measure and the nature of it, by inserting two schemes, one of Dr. Franklin's, the other of your memorialist; and if I might indulge myself with scheming, I should imagine that two such were sufficient, and only requisite and proper: one at the back of Virginia, filling up the vacant space between the five nations and southern confederacy, and connecting into our system, our barrier; the other somewhere in the Cohass or Connecticut river, or wherever best adapted to cover the New England colonies. These, with the little settlements mentioned above in the Indian countries, complete my idea of this branch."—See Governor Pownall's Administration of the Colonies. Vol. II. p. 228—231, 5th edition.

try between the sea and the mountains, cannot much more increase in number; people increasing in proportion to their room and means of subsistence. (See the Observations on the Increase of Mankind, &c. Vol. II.)

2. The French will increase much more, by that acquired room and plenty of subsistence, and become a great people behind us.

3. Many of our debtors, and loose English people, our German servants, and slaves, will probably desert to them, and increase their numbers and strength, to the lessening and weakening of ours.

4. They will cut us off from all commerce and alliance with the western Indians, to the great prejudice of Britain, by preventing the sale and consumption of its manufactures.

5. They will both in time of peace and war (as they have always done against New England) set the Indians on to harass our frontiers, kill and scalp our people, and drive in the advanced settlers; and so, in preventing our obtaining more subsistence by cultivating of new lands, they discourage our marriages, and to keep our people from increasing; thus (if the expression may be allowed) killing thousands of our children before they are born———

If two strong colonies of English were settled between the Ohio and lake Erie, in the places hereafter to be mentioned,—these advantages might be expected:

1. They would be a great security to the frontiers of our other colonies; by preventing the incursions of the French and French Indians of Canada, on the back parts of Pennsylvania, Maryland, Virginia, and the Carolinas; and the frontiers of such new colonies would be much more easily defended, than those of the colonies last mentioned now can be, as will appear hereafter.

2. The dreaded junction of the French settlements in Canada with those of Louisiana would be prevented.

3. In case of a war, it would be easy, from those new colonies, to annoy Louisiana, by going down the Ohio and Mississippi; and the southern part of Canada, by sailing over the lakes; and thereby confine the French within narrow limits.

4. We should secure the friendship and trade of the Miamis or Twigtwees (a numerous people consisting of many tribes, inhabiting the country between the west end of lake Erie, and the south end of lake Huron, and the Ohio) who are at present dissatisfied with the French, and fond of the English, and would gladly encourage and protect an infant English settlement in or near their country, as some of their chiefs have declared to the writer of this memoir. Further, by means of the lakes, the Ohio, and the Mississippi, our trade might be extended through a vast country, among many numerous and distant nations, greatly to the benefit of Britain.

5. The settlement of all the intermediate lands, between the present frontiers of our colonies on one side, and the lakes and Mississippi on the other, would be facilitated and speedily executed, to the great increase of Englishmen, English trade, and English power.

The grants to most of the colonies are of long narrow slips of land, extending west from the Atlantic to the South Sea. They are much too long for their breadth; the extremes at too great a distance; and therefore unfit to be continued under their present dimensions.

Several of the old colonies may conveniently be limited westward by the Alleghany or Apalachian mountains; and new colonies formed west of those mountains.

A single old colony does not seem strong enough to extend itself otherwise than inch by inch: it cannot venture a settlement far distant from the main body, being unable to support it: but if the colonies were united under one governor-general and grand council, agreeable to the Albany plan, they might easily, by their joint force, establish one or more new colonies, whenever they should judge it necessary or advantageous to the interest of the whole.

But if such union should not take place, it is proposed that two charters be granted, *each* for some considerable part of the lands west of Pennsylvania and the Virginian mountains, to a number of the nobility and gentry of Britain; with such Americans as shall join them in contributing to the settlement of those lands, either by paying a proportion of the expense of making such settlements, or by actually going thither in person, and settling themselves and families.

That by such charters it be granted, that every actual settler be entitled to a tract of acres for himself, and acres for every poll in the family he carries with him; and that every contributor of guineas be entitled to a quantity of acres, equal to the share of a single settler, for every such sum of guineas contributed and paid to the colony treasurer; a contributor for shares to have an additional share *gratis*; that settlers may likewise be contributors, and have right of land in both capacities.

That as many and as great privileges and powers of government be granted to the contributors and settlers, as his majesty in his wisdom shall think most fit for their benefit and encouragement, consistent with the general good of the British empire; for extraordinary privileges and liberties, with lands on easy terms, are strong inducements to people to hazard their persons and fortunes in settling new countries: and such powers of government as (though suitable to the circumstances,

and fit to be trusted with an infant colony) might be judged unfit, when it becomes populous and powerful; these might be granted for a term only; as the choice of their own governor for ninety-nine years; the support of government in the colonies of Connecticut and Rhode Island (which *now* enjoy that and other like privileges) being much less expensive, than in the colonies under the immediate government of the crown, and the constitution more inviting.

That the first contributors to the amount of guineas be impowered to choose a treasurer to receive the contribution.

That no contributions be paid till the sum of thousand guineas be subscribed.

That the money thus raised be applied to the purchase of the lands from the Six Nations and other Indians, and of provisions, stores, arms, ammunition, carriages, &c. for the settlers; who, after having entered their names with the treasurer, or person by him appointed to receive and enter them, are, upon public notice given for that purpose, to rendezvous at a place to be appointed, and march in a body to the place destined for their settlement, under the charge of the government to be established over them. Such rendezvous and march however not to be directed, till the number of names of settlers entered, capable of bearing arms, amount at least to thousand———

It is apprehended, that a great sum of money might be raised in America on such a scheme as this; for there are many who would be glad of any opportunity, by advancing a small sum at present, to secure land for their children, which might in a few years become very valuable; and a great number it is thought of actual settlers might likewise be engaged (some from each of our present colonies) sufficient to carry it into full execution by their strength and numbers; provided only, that the crown would be at the expense of removing the little forts the French have erected in their encroachments on his majesty's territories, and supporting a strong one near the falls of Niagara, with a few small armed vessels, or half-galleys to cruize on the lakes.

For the security of this colony in its infancy, a small fort might be erected and for some time maintained at Buffalo-creek on the Ohio, above the settlement; and another at the mouth of the Tioga, on the south side of lake Erie, where a port should be formed, and a town erected, for the trade of the lakes.—The colonists for *this settlement* might march by land through Pennsylvania———

The river Sciota, which runs into the Ohio about two hundred miles below Logs Town, is supposed the fittest seat for the *other colony*; there being for forty miles on each side of it, and quite up to its heads, a body of all rich land; the finest spot of its bigness in all North America, and has the particular advantage of sea-coal in plenty (even above ground in two places) for fuel, when the woods shall be destroyed. This colony would have the trade of the Miamis or Twigtwees; and should, at first, have a small fort near Hockockin, at the head of the river; and another near the mouth of Wabash. Sanduski, a French fort near the lake Erie, should also be taken; and all the little French forts south and west of the lakes, quite to the Mississippi, be removed, or taken and garrisoned by the English.—The colonists for this settlement might assemble near the heads of the rivers in Virginia, and march over land to the navigable branches of the Kanhawa, where they might embark with all their baggage and provisions, and fall into the Ohio, not far above the mouth of Sciota. Or they might rendezvous at Will's Creek, and go down the Monongahela to the Ohio.

The fort and armed vessels at the strait of Niagara would be a vast security to the frontiers of these new colonies against any attempts of the French from Canada. The fort at the mouth of the Wabash would guard that river, the Ohio, and Outawa river, in case any attempt from the French of Mississippi. (Every fort should have a small settlement round it; as the fort would protect the settlers, and the settlers defend the fort and supply it with provisions.)

The difficulty of settling the first English colonies in America, at so great a distance from England, must have been vastly greater than the settling these proposed new colonies: for it would be the interest and advantage of all the present colonies to support these new ones; as they would cover their frontiers, and prevent the growth of the French power behind or near their present settlements; and the new country is nearly at equal distance from all the old colonies, and could easily be assisted from all of them.

And as there are already in all the old colonies many thousands of families that are ready to swarm, wanting more land; the richness and natural advantage of the Ohio country would draw most of them thither, were there but a tolerable prospect of a safe settlement. So that the new colonies would soon be full of people; and from the advantage of their situation, become much more terrible to the French settlements, than those are now to us. The gaining of the back Indian trade from the French, by the navigation of the lakes, &c. would of itself greatly weaken our enemies:—it being now their principal support, it seems highly probable, that in time they must be subjected to the British crown, or driven out of the country.

Such settlements may better be made now, than fifty years hence, because it is easier to settle ourselves, and thereby prevent the French settling there, as they seem now to

intend, than to remove them when strongly settled.

If these settlements are postponed, then more forts and stronger, and more numerous and expensive garrisons must be established, to secure the country, prevent their settling, and secure our present frontiers; the charge of which may probably exceed the charge of the proposed settlements, and the advantage nothing near so great.

The fort at Oswego should likewise be strengthened, and some armed half-gallies, or other small vessels, kept there to cruise on lake Ontario, as proposed by Mr. Pownall in his paper laid before the commissioners at the Albany treaty.

If a fort was also built at Tirondequat on lake Ontario, and a settlement made there near the lake side, where the lands are said to be good, (much better than at Oswego;) the people of such settlements would help to defend both forts on any emergency.

THE CANADA PAMPHLET.

*The Interest of Great Britain considered, with regard to her Colonies, and the Acquisitions of Canada and Guadoloupe.**

I HAVE perused with no small pleasure the "*Letter addressed to Two Great men*," and the *Remarks* on that letter. It is not merely from the beauty, the force, and perspicuity of expression, or the general elegance of manner conspicuous in both pamphlets, that my pleasure chiefly arises; it is rather from this, that I have lived to see subjects of the greatest importance to this nation publicly discussed without party views, or party heat, with decency and politeness, and with no other warmth, than what a zeal for the honour and happiness of our king and country may inspire; and this by writers, whose understanding (however they may differ from each other) appears not unequal to their candour and the uprightness of their intentions.

But, as great abilities have not always the best information, there are, I apprehend, in the Remarks, some opinions not well founded, and some mistakes of so important a nature, as to render a few observations on them necessary for the better information of the public.

The author of the Letter, who must be every way best able to support his own sentiments, will, I hope, excuse me, if I seem officiously to interfere; when he considers, that the spirit of patriotism, like other qualities good and bad is catching; and that his long silence since the Remarks appeared, has made us despair of seeing the subject farther discussed by his masterly hand. The ingenious and candid remarker, too, who must have been misled himself before he employed his skill and address to mislead others, will certainly, since he declares he *aims at no seduction*, be disposed to excuse even the weakest effort to prevent it.

And surely, if the general opinions that possess the minds of the people may possibly be of consequence in public affairs, it must be fit to set those opinions right. If there is danger, as the remarker supposes, that "extravagant expectations" may embarrass "a virtuous and able ministry," and "render the negotiation for peace a work of infinite difficulty;" there is no less danger that expectations too low, through want of proper information, may have a contrary effect, may make even a virtuous and able ministry less anxious, and less attentive to the obtaining points, in which the honour and interest of the nation are essentially concerned; and the people less hearty in supporting such a ministry and its measures.

The people of this nation are indeed respectable, not for their numbers only, but for their understanding and their public spirit: they manifest the first, by their universal approbation of the late prudent and vigorous measures, and the confidence they so justly repose in a wise and good prince, and an honest and able administration; the latter they have demonstrated by the immense supplies granted in parliament unanimously, and paid through the whole kingdom with cheerfulness. And since to this spirit and these supplies our "victories and successes" have in great measure been owing; is it quite right, is it generous to say, with the remarker, that the people "had no share in acquiring them?" The mere mob he cannot mean, even where he speaks of the madness of the people; for the madness of the mob must be too feeble and impotent, armed as the government of this country at present is, to "overrule," even in the slightest instances, the virtue "and moderation" of a firm and steady ministry.

While the war continues, its final event is quite uncertain. The victorious of this year may be the vanquished of the next. It may therefore be too early to say, what advantages we ought absolutely to insist on, and make

* In the year 1760, upon the prospect of a peace with France, the *Earl* of *Bath* addressed a Letter to Two Great Men (*Mr. Pitt* and the *Duke* of *Newcastle*) on the terms necessary to be insisted upon in the negotiation. He preferred the acquisition of Canada, to acquisitions in the West Indies. In the same year there appeared Remarks on the letter addressed to two great men, containing opposite opinions on this and other subjects. At this moment a philosopher stepped into the controversy, and wrote a pamphlet entitled, "The Interest of Great Britain considered, with Regard to her Colonies," &c. The arguments he used, appear to have carried weight with them, for Canada was kept by the peace.

The above piece first appeared in the shape of a pamphlet, printed for Becket, 1761.

In the original, the author had added his observations concerning the Increase of Mankind, Peopling of Countries, &c (printed in another part of this edition) introduced by the following note. "In confirmation of the writer's opinion concerning population, manufactures, &c. he has thought it not amiss to add an extract from a piece written some years since in America, where the facts must be well known, on which the reasonings are founded. It is entitled, Observations, &c."

the *sine quibus non* of a peace. If the necessity of our affairs should oblige us to accept of terms less advantageous than our present successes seem to promise us; an intelligent people, as ours is, must see that necessity, and will acquiesce. But as a peace, when it is made, may be made hastily; and as the unhappy continuance of the war affords us time to consider, among several advantages gained or to be gained, which of them may be most for our interest to retain, if some and not all may possibly be retained; I do not blame the public disquisition of these points, as premature or useless. Light often arises from a collision of opinions, as fire from flint and steel; and if we can obtain the benefit of the *light*, without danger from the *heat* sometimes produced by controversy, why should we discourage it?

Supposing then, that heaven may still continue to bless his majesty's arms, and that the event of this just war may put it in our power to retain some of our conquests at the making of a peace; let us consider,

1. *The security of a dominion, a justifiable and prudent ground upon which to demand cessions from an enemy.*

Whether we are to confine ourselves to those possessions only *that were "the objects for which we began the war."* This the remarker seems to think right, when the question relates to "*Canada, properly so called;* it having never been mentioned as one of those objects, in any of our memorials or declarations, or in any national or public act whatsoever." But the gentleman himself will probably agree, that if the cession of Canada would be a real advantage to us; we may demand it under his second head, as an "*indemnification* for the charges incurred" in recovering our just rights; otherwise, according to his own principles, the demand of Guadaloupe can have no foundation.—That "our claims before the war were large enough for possession and for security too," though it seems a clear point with the ingenious remarker, is, I own, not so with me. I am rather of the contrary opinion, and shall presently give my reasons.

But first let me observe, that we did not make those claims because they were large enough for security, but because we could rightfully claim no more. Advantages gained in the course of this war may increase the extent of our rights. Our claims before the war contained *some* security; but that is no reason why we should neglect acquiring *more*, when the demand of more is become reasonable. It may be reasonable in the case of America, to ask for the security recommended by the author of the Letter, though it would be preposterous to do it in many cases. His proposed demand is founded on the little value of Canada to the French; the right we have to ask, and the power we may have to insist on an indemnification for our expenses; the difficulty the French themselves will be under of restraining their restless subjects in America from encroaching on our limits and disturbing our trade; and the difficulty on our parts of preventing encroachments, that may possibly exist many years without coming to our knowledge.

But the remarker "does not see why the arguments, employed concerning a security for a peaceable behaviour in Canada, would not be equally cogent for calling for the same security in Europe." On a little farther reflection, he must I think be sensible, that the circumstances of the two cases are widely different.—*Here* we are separated by the best and clearest of boundaries, the ocean, and we have people in or near every part of our territory. Any attempt to encroach upon us, by building a fort even in the obscurest corner of these islands, must therefore be known and prevented immediately. The aggressors also must be known, and the nation they belong to would be accountable for their aggression. In America it is quite otherwise. A vast wilderness, thinly or scarce at all peopled, conceals with ease the march of troops and workmen. Important passes may be seized within our limits, and forts built in a month, at a small expense, that may cost us an age, and a million, to remove. Dear experience has taught this. But what is still *worse*, the wide extended forests between our settlements and theirs, are inhabited by barbarous tribes of savages, that delight in war, and take pride in murder; subjects properly neither of the French nor English, but strongly attached to the former by the art and indefatigable industry of priests, similarity of superstitions, and frequent family alliances. These are easily, and have been continually, instigated to fall upon and massacre our planters, even in times of full peace between the two crowns; to the certain diminution of our people and the contraction of our settlements. And though it is known they are supplied by the French, and carry their prisoners to them, we can, by complaining, obtain no redress; as the governors of Canada have a ready excuse, that the Indians are an independent people, over whom they have no power, and for whose actions they are therefore not accountable. Surely circumstances so widely different may reasonably authorize different demands of security in America, from such as are usual or necessary in Europe.

The remarker however thinks, that our real dependence for keeping "France or any other nation true to her engagements, must not be in demanding securities which no nation whilst *independent* can give; but on our own strength and our own viligance. No

nation that has carried on a war with disadvantage, and is unable to continue it, can be said, under such circumstances, to be *independent;* and while either side thinks itself in a condition to demand an indemnification, there is no man in his senses, but will, *cæteris paribus*, prefer an indemnification, that is a cheaper and more effectual security than any other he can think of. Nations in this situation demand and cede countries by almost every treaty of peace that is made. The French part of the island of St. Christophers was added to Great Britain in circumstances altogether similar to those in which a few months may probably place the country of Canada. Farther security has always been deemed a motive with a conqueror to be less moderate; and even the *vanquished* insist upon security as a reason for demanding what they acknowledge they could not otherwise properly ask. The security of the frontier of France *on the side of the Netherlands* was always considered in the negotiation, that began at Gertrudenburg, and ended with that war. For the same reason they demanded and had Cape Breton. But a war, concluded to the advantage of France, has always added something to the power, either of France, or the house of Bourbon. Even that of 1733, which she commenced with declarations of her having no ambitious views, and which finished by a treaty, at which the ministers of France repeatedly declared, that she desired nothing for herself, in effect gained for her Lorrain, an indemnification ten times the value of all her North American possessions. In short, security and quiet of princes and states have ever been deemed sufficient reasons, when supported by power, for disposing of rights; and such dispositions have never been looked on as want of moderation. It has always been the foundation of the most general treaties. The security of Germany was the argument for yielding considerable possessions there to the Swedes: and the security of Europe divided the Spanish monarchy by the partition treaty, made between powers who had no other right to dispose of any part of it. There can be no cession that is not supposed at least, to increase the power of the party to whom it is made. It is enough that he has a right to ask it, and that he does it not merely to serve the purposes of a dangerous ambition.

Canada, in the hands of Britain, will endanger the kingdom of France as little as any other cession; and from its situation and circumstances cannot be hurtful to any other state. Rather, if peace be an advantage, this cession may be such to all Europe. The present war teaches us, that disputes arising in America, may be an occasion of embroiling nations who have no concerns there. If the French remain in Canada and Louisiana, fix the boundaries as you will between us and them, we must border on each other for more than fifteen hundred miles. The people that inhabit the frontiers are generally the refuse of both nations, often of the worst morals and the least discretion; remote from the eye, the prudence, and the restraint of government. Injuries are therefore frequently, in some part or other of so long a frontier, committed on both sides, resentment provoked, the colonies are first engaged, and then the mother countries. And two great nations can scarce be at war in Europe, but some other prince or state thinks it a convenient opportunity to revive some ancient claim, seize some advantage, obtain some territory, or enlarge some power at the expense of a neighbour. The flames of war, once kindled, often spread far and wide, and the mischief is infinite. Happy it proved to both nations, that the Dutch were prevailed on finally to cede the New Netherlands (now the province of New York) to us at the peace of 1674; a peace that has ever since continued between us, but must have been frequently disturbed, if they had retained the possession of that country, bordering several hundred miles on our colonies of Pennsylvania westward, Connecticut and the Massachusetts eastward. Nor is it to be wondered at, that people of different language, religion, and manners, should in those remote parts engage in frequent quarrels; when we find, that even the people of our *own colonies* have frequently been so exasperated against *each other*, in their disputes about boundaries, as to proceed to open violence and bloodshed.

2. *Erecting forts in the back settlements, almost in no instance a sufficient security against the Indians and the French; but the possession of Canada implies every security, and ought to be had, while in our power.*

But the remarker thinks *we shall be* sufficiently *secure in America, if we "raise English forts at such passes as may at once make us respectable to the French and to the Indian nations."* The security desirable in America may be considered as of three kinds. 1. A security of possession that the French shall not drive us out of the country. 2. A security of our planters from the inroads of savages, and the murders committed by them. 3. A security that the British nation shall not be obliged, on every new war, to repeat the immense expense occasioned by this, to defend its possessions in America. Forts, in the most important passes, may, I acknowledge, be of use to obtain the *first* kind of security: but as those situations are far advanced beyond the inhabitants, the expense of maintaining and supplying the garrisons will be very great, even in time of full peace, and immense on every interruption of it; as it is easy for skulking-parties of the enemy, in such long roads through the woods, to inter-

cept and eat off our convoys, unless guarded continually by great bodies of men.—The *second* kind of security will not be obtained by such forts, unless they were connected by a wall like that of China, from one end of our settlements to the other. If the Indians, when at war, marched like the Europeans, with great armies, heavy cannon, baggage, and carriages; the passes through which alone such armies could penetrate our country, or receive their supplies, being secured, all might be sufficiently secure; but the case is widely different. They go to war, as they call it, in small parties; from fifty men down to five. Their hunting life has made them acquainted with the whole country, and scarce any part of it is impracticable to such a party. They can travel through the woods even by night, and know how to conceal their tracks. They pass easily between your forts undiscovered; and privately approach the settlements of your frontier inhabitants. They need no convoys of provisions to follow them; for whether they are shifting from place to place in the woods, or lying in wait for an opportunity to strike a blow, every thicket and every stream furnishes so small a number with sufficient subsistence. When they have surprised separately, and murdered and scalped a dozen families, they are gone with inconceivable expedition through unknown ways: and it is very rare that pursuers have any chance of coming up with them. In short, long experience has taught our planters, that they cannot rely upon forts as a security against Indians; the inhabitants of Hackney might as well rely upon the tower of London, to secure them against highwaymen and housebreakers.—As to the *third* kind of security, that we shall not, in a few years, have all we have done to do over again in America, and be obliged to employ the same number of troops, and ships, at the same immense expense, to defend our possessions there, while we are in proportion weakened here: such forts I think, cannot prevent this. During a peace, it is not to be doubted the French, who are adroit at fortifying, will likewise erect forts in the most advantageous places of the country we leave them; which will make it more difficult than ever to be reduced in case of another war. We know by experience of this war, how extremely difficult it is to march an army through the American woods, with its necessary cannon and stores, sufficient to reduce a very slight fort. The accounts at the treasury will tell you, what amazing sums we have necessarily spent in the expeditions against two very trifling forts, Duquesne and Crown Point. While the French retain their influence over the Indians, they can easily keep our long extended frontier in continual alarm, by a very few of those people; and with a small number of regulars and militia, in such a country, we find they can keep an army of ours in full employ for several years. We therefore shall not need to be told by our colonies, that if we leave Canada, however circumscribed, to the French, "we have done nothing;" we shall soon be made sensible *ourselves* of this truth, and to our cost.

I would not be understood to deny, that even if we subdue and retain Canada, some *few forts* may be of use to secure the goods of the traders, and protect the commerce, in case of any sudden misunderstanding with any tribe of Indians: but these forts will be best under the care of the colonies interested in the Indian trade, and garrisoned by their provincial forces, and at their own expense. Their own interest will then induce the American governments to take care of such forts in proportion to their importance, and see that the officers keep their corps full, and mind their duty. But any troops of ours placed there, and accountable here, would, in such remote and obscure places, and at so great a distance from the eye and inspection of superiors, soon become of little consequence, even though the French were left in possession of Canada. If the four independent companies, maintained by the crown in New York more than forty years, at a great expense, consisted, for most part of the time, of faggots chiefly; if their officers enjoyed their places as sinecures, and were only, as a writer of that country styles them, a kind of military monks; if this was the state of troops posted in a populous country, where the imposition could not be so well concealed; what may we expect will be the case of those, that shall be posted two, three, or four hundred miles from the inhabitants, in such obscure and remote places as Crown Point, Oswego, Duquesne, or Niagara? they would scarce be even faggots; they would dwindle to mere names upon paper, and appear no where but on the muster-rolls.

Now *all the kinds* of security we have mentioned are obtained by subduing and *retaining* Canada. Our present possessions in America are secured; our planters will no longer be massacred by the Indians, who, depending absolutely on us for what are now become the necessaries of life to them (guns, powder, hatchets, knives, and clothing) and having no other Europeans near, that can either supply them, or instigate them against us; there is no doubt of their being always disposed, if we treat them with common justice, to live in perpetual peace with us. And with regard to France, she cannot, in case of another war, put us to the immense expense of defending that long extended frontier; we shall then, as it were, have our backs against a wall in America; the sea coast will be easily protected by our superior naval power: and here "our own watchfulness and our own strength

will be properly, and cannot but be successfully employed. In this situation, the force now employed in that part of the world, may be spared for any other service here or elsewhere; so that both the offensive and defensive strength of the British empire, on the whole, will be greatly increased.

But to leave the French in possession of Canada, *when it is in our power to remove them, and depend* (as the remarker proposes) *on our own* "strength and watchfulness" *to prevent the mischiefs that may attend it, seems neither safe nor prudent.* Happy as we now are, under the best of kings, and in the prospect of a succession promising every felicity a nation was ever blessed with; happy too in the wisdom and vigour of every part of the administration; we cannot, we ought not to promise ourselves the uninterrupted continuance of those blessings. The safety of a considerable part of the state, and the interest of the whole, are not to be trusted to the wisdom and vigour of *future administrations;* when a security is to be had more effectual, more constant, and much less expensive. They, who can be moved by the apprehension of dangers so remote, as that of the future independence of our colonies (a point I shall hereafter consider) seem scarcely consistent with themselves, when they suppose we may rely on the wisdom and vigour of an administration for their safety.—I should indeed think it less material whether Canada were ceded to us or not, if I had in view only the security of *possession* in our colonies. I entirely agree with the remarker, that we are in North America "a far greater continental as well as naval power;" and that only cowardice or ignorance can subject our colonies there to a French conquest. But for the same reason I disagree with him widely upon another point.

3. *The blood and treasure spent in the American wars, not spent in the cause of the colonies alone.*

I do not think, that our "blood and treasure has been expended," as he intimates, "*in the cause of the colonies,*" and that we are "making conquests for *them;*" yet I believe this is too common an error. I do not say, they are altogether unconcerned in the event. The inhabitants of them are, in common with the other subjects of Great Britain, anxious for the glory of her crown, the extent of her power and commerce, the welfare and future repose of the whole British people. They could not therefore but take a large share in the affronts offered to Britain; and have been animated with a truly British spirit to exert themselves beyond their strength, and against their evident interest. Yet so unfortunate have they been, that their virtue has made against them; for upon no better foundation than this have they been supposed the authors of a war, carried on for their advantage only. It is a great mistake to imagine that the American country in question between Great Britain and France is claimed as the property of any *individuals or public body in America;* or that the possession of it by Great Britain is likely, in any lucrative view, to redound at all to the advantage of any person there. On the other hand, the the bulk of the inhabitants of North America are *land-owners*, whose lands are inferior in value to those of Britain, only by the want of an equal number of people. It is true, the accession of the large territory claimed before the war began (especially if that be secured by the possession of Canada) will tend to the increase of the British subjects faster, than if they had been confined within the mountains: yet the increase within the mountains only would evidently make the comparative population equal to that of Great Britain much sooner than it can be expected, when our people are spread over a country six times as large. I think this is the only point of light in which this account is to be viewed, and is the only one in which any of the colonies are concerned.—No colony, no possessor of lands in any colony, therefore, wishes for conquests, or can be benefited by them, otherwise than as they may be a means of *securing peace on their borders.* No considerable advantage has resulted to the colonies by the conquests of this war, or can result from confirming them by the peace, but what they must enjoy in common with the rest of the British people; with this evident drawback from their share of these advantages, that they will necessarily lessen, or at least prevent the increase of the value of what makes the principal part of their private property——their land. A people, spread though the whole tract of country, on this side the Mississippi, and secured by Canada in our hands, would probably for some centuries find employment in agriculture, and thereby free us at home effectually from our fears of American manufactures. Unprejudiced men well know, that all the penal and prohibitory laws that were ever thought on will not be sufficient to prevent manufactures in a country, whose inhabitants surpass the number that can subsist by the husbandry of it. That this will be the case in America soon, if our people remain confined within the mountains, and almost as soon should it be unsafe for them to live beyond, though the country be ceded to us, no man acquainted with political and commercial history can doubt. Manufactures are founded in poverty: it is the multitude of poor without land in a country, and who must work for others at low wages or starve, that enables undertakers to carry on a manufacture, and afford it cheap enough to prevent

the importation of the same kind from abroad, and to bear the expense of its own exportation. —But no man, who can have a piece of land of his own, sufficient by his labour to subsist his family in plenty, is poor enough to be a manufacturer, and work for a master. Hence, while there is land enough in America for our people, *there can never be manufactures to any amount or value.* It is a striking observation of a very *able pen*,* that the natural livelihood of the thin inhabitants of a forest country is hunting; that of a greater number, pasturage: that of a middling population, agriculture; and that of the greatest, manufactures; which last must subsist the bulk of the people in a full country, or they must be subsisted by charity, or perish. The extended population, therefore, that is most advantageous to Great Britain, will be best effected, because only effectually secured, by the possession of Canada.

So far as the *being* of our present colonies in North America is concerned, I think indeed with the remarker, that the French there are not "*an enemy to be apprehended*,"—but the expression is too vague to be applicable to the present, or indeed to any other case. Algiers, Tunis, and Tripoli, unequal as they are to this nation in power and numbers of people, are enemies to be still apprehended: and the highlanders of Scotland have been so for many ages, by the greatest princes of Scotland and Britain. The wild Irish were able to give a great deal of disturbance even to queen Elizabeth, and cost her more blood and treasure than her war with Spain. Canada, in the hands of France, has always stinted the growth of our colonies, in the course of this war, and indeed before it, has disturbed and vexed even the best and strongest of them; has found means to murder thousands of their people, and unsettle a great part of their country. Much more able will it be to starve the growth of an infant settlement. Canada has also found means to make this nation spend two or three millions a year in America; and a people, how small soever, that in their present situation, can do this as often as we have a war with them, is, methinks, "an enemy to be apprehended."

Our North American colonies are to be considered as the *frontier of the British empire* on that side. The frontier of any dominion being attacked, it becomes not merely "the cause" of the people immediately attacked (the inhabitants of that frontier) but properly "the cause" of the whole body. Where the frontier people owe and pay obedience, there they have a right to look for protection: no political proposition is better established than this. It is therefore invidious, to represent the "blood and treasure" spent in this war, as spent in "the cause of the colonies" only; and that they are "absurd and ungrateful," if they think we have done nothing, unless we "make conquests for them," and reduce Canada to gratify their "vain ambition," &c. It will not be a conquest for *them*, nor gratify any vain ambition of theirs. It will be a conquest for the *whole*; and all our people will, in the increase of trade, and the case of taxes, find the advantage of it. Should we be obliged at any time, to make a war for the protection of our commerce, and to secure the exportation of our manufactures, would it be fair to represent such a war, merely as blood and treasure spent in the cause of the weavers of Yorkshire, Norwich, or the West; the cutlers of Sheffield, or the buttonmakers of Birmingham? I hope it will appear before I end these sheets, that if ever there was a national war, this is truly such a one: a war in which the interest of the whole nation is directly and fundamentally concerned. Those, who would be thought deeply skilled in human nature, affect to discover self-interested views every where, at the bottom of the fairest the most generous conduct. Suspicions and charges of this kind meet with ready reception and belief in the minds even of the multitude, and therefore less acuteness and address, than the remarker is possessed of, would be sufficient to persuade the nation generally, that all the zeal and spirit, manifested and exerted by the colonies in this war, was only in "their own cause," to "make conquest for themselves," to engage us to make more for them, to gratify their own "vain ambition."

But should they now humbly address the mother-country in the terms and the sentiments of the remarker; return her their grateful acknowledgments for the blood and treasure she had spent in "their cause;" confess that enough had not been done "for them;" allow that "English forts, raised in proper passes, will, with the wisdom and vigour of her administration," be a sufficient future protection; express their desires that their people may be confined within the mountains, lest, if they be suffered to spread and extend themselves in the fertile and pleasant country on the other side, they should "increase infinitely from all causes," "live wholly on their own labour" and become independent; beg therefore that the French may be suffered to remain in possession of Canada, as their neighbourhood may be useful to prevent our increase, and the removing them may "in its consequences be even dangerous:"—I say, should such an address from the colonies make its appearance here (though, according to the remarker, it would be a most just and reasonable one) would it not, might it not with more justice be answered:—We understand you, gentlemen, perfectly well:

* Dr. Adam Smith, who had not at this time printed his Political Economy.

you have only your interest in view: you want to have the people confined within your present limits, that in a few years the lands you are possessed of may increase tenfold in value! you want to reduce the price of labour, by increasing numbers on the same territory, that you may be able to set up manufactures and vie with your mother-country! you would have your people kept in a body, that you may be more able to dispute the commands of the crown, and obtain an independency. You would have the French left in Canada, to exercise your military virtue, and make you a warlike people, that you may have more confidence to embark in schemes of disobedience, and greater ability to support them! You have tasted too, the sweets of TWO OR THREE MILLIONS sterling per annum spent among you by our fleets and forces, and you are unwilling to be without a pretence for kindling up another war, and thereby occasioning a repetition of the same delightful doses! But, gentlemen, allow us to understand *our* interest a little likewise: we shall remove the French from Canada, that you may live in peace, and we be no more drained by your quarrels. You shall have land enough to cultivate, that you may have neither necessity nor inclination to go into manufacture for you, and govern you.

A reader of the Remarks may be apt to say, if this writer would have us restore Canada, on principles of moderation, how can we, consistent with those principles, retain Gaudaloupe, which he represents of so much greater value!—I will endeavour to explain this, because by doing it, I shall have an opportunity of showing the truth and good sense of the answer to the interested application I have just supposed: the author then is only apparently and not really inconsistent with himself. If we can obtain the credit of moderation by restoring Canada, it is well: but we should, however, restore it at *all events;* because it would not only be of no use to us; but "the possession of it (in his opinion) may in its consequences be dangerous." As how? Why, plainly, (at length it comes out) if the French are not left there to check the growth of our colonies, "they will extend themselves almost without bounds into the inland parts, and increase infinitely, from all causes; becoming a numerous, hardy, independent people; possessed of a strong country, communicating little or not at all with England, living wholly on their own labour, and in process of time knowing little and inquiring little about the mother-country." In short, according to this writer, our present colonies are large enough and numerous enough; and the French ought to be left in North America to prevent their increase, lest they become not only useless, but dangerous to Britain. I agree with the gentleman, that with Canada in our possession, our people in America will increase amazingly. I know, that their common rate of increase, where they are not molested by the enemy, is doubling their numbers every twenty-five years, by natural generation only; exclusive of the accession of foreigners.* I think this increase continuing would probably, in a century more, make the number of British subjects on that side the water more numerous than they now are on this; But,

4. *Not necessary that the American colonies should cease being useful to the mother-country. Their preference over the West-Indian colonies stated.*

I am far from entertaining on that account, any fears of their becoming either useless or dangerous to us; and I look on those fears to be merely imaginary, and without any probable foundation.—The remarker is reserved in giving his reasons; as in his opinion this "is not a fit subject for discussion."—I shall give mine, because I conceive it a subject necessary to be discussed; and the rather, as those fears, how groundless and chimerical soever, may by possessing the multitude, possibly induce the ablest ministry to conform to them against their own judgment; and thereby prevent the assuring to the British name and nation a stability and permanancy, that no man acquainted with history durst have hoped for, till our American possessions opened the pleasing prospect. The remarker thinks, that our people in America, "finding no check from Canada, would extend themselves almost without bounds into the inland parts, and increase infinitely from all causes." The very reasons he assigns for their so extending, and which is indeed the true one (their being "invited to it by the pleasantness, fertility, and plenty of the country,") may satisfy us, that this extension will continue to proceed, as long as there remains any pleasant fertile country within their reach. And if we even suppose them confined by the waters of the Mississippi westward, and by those of St. Laurence and the lakes to the northward; yet still we shall leave them room enough to increase, even in the manner of settling now practised there, till they amount to perhaps a hundred millions of souls. This must take some centuries to ful-

* The reason of this greater increase in America than in Europe is, that in old settled countries, all trades, farms, offices, and employments are full; and many people refrain from marriage till they see an opening, in which they can settle themselves, with a reasonable prospect of maintaining a family; but in America, it being easy to obtain land, which, with moderate labour will afford subsistence and something to spare, people marry more readily and earlier in life, whence arises a numerous offspring and the swift population of those countries. It is a common error, that we cannot fill our provinces or increase the number of them, without draining this nation of its people. The increase alone of our present colonies is sufficient for both those purposes. [Written in 1760.]

fil: and in the *mean time*, this nation must necessarily supply them with the manufactures they consume; because the new settlers will be employed in agriculture; and the new settlements will so continually draw off the spare hands from the old, that our present colonies will not, during the period we have mentioned, find themselves in a condition to manufacture, even for their own inhabitants, to any considerable degree, much less for those who are settling behind them.

Thus our trade must, till that country becomes as fully peopled as England (that is for centuries to come) be continually increasing, and with it our naval power; because the ocean is between us and them, and our ships and seamen must increase as that trade increases.—The human body and the political differ in this; that the first is limited by nature to a certain stature, which, when attained, it cannot ordinarily exceed: the other, by better government and more prudent policy, as well as by the change of manners and other circumstances, often takes fresh starts of growth, after being long at a stand; and may add tenfold to the dimensions it had for ages been confined to. The mother, being of full stature, is in a few years equalled by a growing daughter: but in the case of a mother-country and her colonies, it is quite different. The growth of the children tends to increase the growth of the mother, and so the difference and superiority is longer preserved. Were the inhabitants of this island limited to their present number by any thing in nature, or by unchangeable circumstances, the equality of population between the two countries might indeed sooner come to pass: but sure experience, in those parts of the island where manufactures have been introduced, teaches us—that people increase and multiply in proportion as the means and facility of gaining a livelihood increase: and that this island, if they could be employed, is capable of supporting ten times its present number of people. In proportion, therefore, as the demand increases for the manufactures of Britain, by the increase of people in her colonies, the number of her people at home will increase; and with them, the strength as well as the wealth of the nation. For satisfaction in this point, let the reader compare in his mind the number and force of our present fleets, with our fleet in queen Elizabeth's time,* before we had colonies. Let him compare the ancient, with the present state of our towns on or near our western coast (Manchester, Liverpool, Kendal, Lancaster, Glasgow, and the countries round them) that trade with any manufactures for our colonies (not to mention Leeds, Halifax, Sheffield, and Birmingham,) and consider what a difference there is in the numbers of people, buildings, rents, and the value of land and of the produce of land; even if he goes back no farther than is within man's memory. Let him compare those countries with others on the same island, where manufactures have not yet extended themselves: observe the present difference, and reflect how much greater our strength may be (if numbers give strength) when our manufactures shall occupy every part of the island where they can possibly be subsisted.

But, say the objectors, "there is a *certain distance from the sea*, in America, beyond which the expense of carriage will put a stop to the sale and consumption of your manufactures; and this, with the difficulty of making returns for them, will oblige the inhabitants to manufacture for themselves; of course, if you suffer your people to extend their settlements beyond that distance, your people become useless to you:" and this distance is limited by some to two hundred miles, by others to the Apalachian mountains.—Not to insist on a plain truth, that no part of a dominion, from whence a government may on occasion draw supplies and aids both of men and money (though at too great a distance to be supplied with manufactures from some other part) is therefore to be deemed useless to the whole; I shall endeavour to show, that these imaginary limits of utility, even in point of commerce, are much too narrow. The inland parts of the continent of Europe are farther from the sea, than the limits of settlement proposed for America. Germany is full of tradesmen and artificers of all kinds, and the governments there are not all of them always favourable to the commerce of Britain; yet it is a well-known fact, that our manufactures find their way even into the heart of Germany. Ask the great manufacturers and merchants of the Leeds, Sheffield, Birmingham, Manchester, and Norwich goods; and they will tell you, that some of them send their riders frequently through France or Spain, and Italy, up to Vienna, and back through the middle and northern parts of Germany, to show samples of their wares, and collect orders, which they receive by almost every mail, to a vast amount. Whatever charges arise on the carriage of goods are added to the value, and all paid by the consumer. If these nations, over whom we can have no government, over whose consumption we can have no influence, but what arises from the cheapness and goodness of our wares, whose trade, manufactures, or commercial connexions are not subject to the control of our laws, as those of our colonies certainly are in some degree; I say, if these nations purchase and consume such quantities of our goods, notwithstanding the remoteness of their situation from the sea; how much less

* Viz. forty sail, none of more than forty guns.

likely is it that the settlers in America, who must for ages be employed in agriculture chiefly, should make cheaper for themselves the goods our manufactures at present supply them with; even if we suppose the carriage five, six, or seven hundred miles from the sea as difficult and expensive, as the like distance into Germany: whereas in the latter, the natural distances are frequently doubled by political obstructions; I mean the intermixed territories and clashing interests of princes.* But when we consider, that the inland parts of America are penetrated by great navigable rivers: and there are a number of great lakes, communicating with each other, with those rivers, and with the sea, very small portages here and there excepted;† that the seacoasts (if one may be allowed the expression) of those lakes only, amount at least to two thousand seven hundred miles, exclusive of the rivers running into them (many of which are navigable to a great extent for boats and canoes, through vast tracts of country;) how little likely is it, that the expense on the carriage of our goods into those countries should prevent the use of them. If the poor Indians in those remote parts are now able to pay for the linen, woollen, and iron wares they are at present furnished with by the French and English traders (though Indians have nothing but what they get by hunting, and the goods are loaded with all the impositions fraud and knavery can contrive to enhance their value) will not industrious English farmers, hereafter settled in those countries, be much better able to pay for what shall be brought them in the way of fair commerce.

If it is asked, *What* can such farmers raise, wherewith to pay for the manufactures they may want from us? I answer, that the inland parts of America in question are well known to be fitted for the production of hemp, flax, potash, and above all, silk; the southern parts may produce olive oil, raisins, currants, indigo, and cochineal. Not to mention horses and black cattle, which may easily be driven to the maritime markets, and at the same time assist in conveying other commodities. That the commodities first mentioned may easily, by water and land carriage, be brought to the sea-ports from interior America, will not seem incredible, when we reflect, that *hemp* formerly came from the Ukraine and most southern parts of Russia to Wologda, and down the Dwina to Archangel; and thence, by a perilous navigation, round the North Cape to England, and other parts of Europe. It now comes from the same country up the Dnieper, and down the Duna,* with much land-carriage. Great part of the Russia *iron*, no high priced commodity, is brought three hundred miles by land and water from the heart of Siberia. *Furs* [the produce too of America] are brought to Amsterdam from all parts of Siberia, even the most remote, Kamstchatka. The same country furnishes me with another instance of extended inland commerce. It is found worth while to keep up a mercantile communication between Pekin in China, and Petersburgh. And none of these instances of inland commerce *exceed* those of the courses by which, at several periods, *the whole of the trade of the East* was carried on. Before the prosperity of the Mameluke dominion in Egypt, fixed the staple for the riches of the East at Cairo and Alexandria (whither they were brought from the Red Sea) great part of those commodities were carried to the cities of Cashgar and Balk. (This gave birth to many towns, that still subsist upon the remains of their ancient opulence, amidst a people and country equally wild.) From thence those goods were carried down the Amû (the ancient Oxus) to the Caspian Sea, and up the Wolga to Astrachan; from whence they were carried over to, and down the Don, to the mouth of that river; and thence again the Venetians directly, and the Genoese and Venetians indirectly (by way of Kaffa and Trebisonde) dispersed them through the Mediterranean and some other parts of Europe. Another part of those goods was carried over land from the Wolga to the river Duna and Neva; from both they were carried to the city of Wisbuy in the Baltic (so eminent for its sea-laws;) and from the city of Ladoga on the Neva, we are told they were even carried by the Dwina to Archangel; and from thence round the North Cape.—If iron and hemp will bear the charge of carriage from this inland country, *other metals* will, as well as iron; and certainly *silk*, since 3*d.* per *lb.* is not above 1 per cent. on the value, and amounts to 28*l.* per ton. If the *growths* of a country find their way out of it; the *manufactures* of the country where they go will infallibly find their way into it.

They, who understood the economy and

* Sir C. Whitworth has the following assertion: "Each state in Germany is jealous of its neighbours; and hence, rather than facilitate the export or transmit of its neighbour's products or manufactures, they have all recourse to strangers." State of Trade, p. xxiv.

† From New York into lake Ontario, the land-carriage of the several portages altogether, amounts to but about twenty-seven miles. From lake Ontario into lake Erie, the land-carriage at Niagara is but about twelve miles. All the lakes above Niagara communicate by navigable straits, so that no land-carriage is necessary to go out of one into another. From Presqu'isle on lake Erie, there are but fifteen miles land-carriage, and that a good wagon road, to Beef River, a branch of the Ohio; which brings you into a navigation of many thousand miles inland, if you take together the Ohio, the Mississippi, and all the great rivers and branches that run into them.

* The reader will not confound the river Duna with the river Dwina.—The fork of the Ohio is about four hundred miles distant from the sea, and the fork of the Mississippi about nine hundred: it is four hundred miles from Petersburgh to Moscow, and very considerably more than four thousand from Petersburgh to Pekin.

principles of manufactures, know, that it is impossible to establish them in places not populous: and even in those that are populous, hardly possible to establish them to the prejudices of the places *already in possession of them.* Several attempts have been made in France and Spain, countenanced by government, to draw from us, and establish in those countries, our hardware and woollen manufactures; but without success. The reasons are various. A manufacture is part of a great system of commerce, which takes in conveniences of various kinds; methods of providing materials of all sorts, machines for expediting and facilitating labour, all the channels of correspondence for vending the wares, the credit and confidence necessary to found and support this correspondence, the mutual aid of different artizans, and a thousand other particulars, which time and long experience have *gradually* established. A part of such a system cannot support itself without the whole: and before the whole can be obtained the part perishes. Manufactures, where they are in perfection, are carried on by a multiplicity of hands, each of which is expert only in his own part; no one of them a master of the whole; and, if by any means spirited away to a foreign country, he is lost without his fellows. Then it is a matter of the extremest difficulty to persuade a complete set of workmen, skilled in all parts of a manufactory, to leave their country together, and settle in a foreign land. Some of the idle and drunken may be enticed away; but these only disappoint their employers, and serve to discourage the undertaking. If by royal munificence, and an expense that the profits of the trade alone would not bear, a complete set of good and skilful hands are collected and carried over, they find so much of the system imperfect, many things wanting to carry on the trade to advantage, so many difficulties to overcome, and the knot of hands so easily broken by death, dissatisfaction, and desertion; that they and their employers are discouraged together, and the project vanishes into smoke. Hence it happens, that established manufactures are hardly ever lost, but by foreign conquest, or by some eminent interior fault in manners or government; a bad police oppressing and discouraging the workmen, or religious persecutions driving the sober and industrious out of the country. There is, in short, scarce a single instance in history of the contrary, where manufactures have once taken firm root. They sometimes start up in a new place; but are generally supported, like exotic plants, at more expense than they are worth for any thing but curiosity; until these new seats become the refuge of the manufactures driven from the old ones. The conquest of Constantinople, and final reduction of the Greek empire, dispersed many curious manufacturers into different parts of Christendom. The former conquests of its provinces, had *before* done the same. The loss of liberty in Verona, Milan, Florence, Pisa, Pistoia, and other great cities of Italy, drove the manufacturers of woollen clothes into Spain and Flanders. The latter first lost their trade and manufactures to Antwerp and the cities of Brabant; from whence, by persecution for religion, they were sent into Holland and England: while the civil wars, during the minority of Charles the First of Spain, which ended in the loss of the liberty of their great towns, ended too in the loss of the manufactures of Toledo, Segovia, Salamanca, Medina del Campo, &c. The revocation of the *edict of Nantes* communicated, to all the protestant part of Europe, the paper, silk, and other valuable manufactures of France; almost peculiar at that time to that country, and till then in vain attempted elsewhere. To be convinced, that it is not soil and climate, nor even freedom from taxes, that determines the residence of manufacturers, we need only turn our eyes on Holland; where a multitude of manufacturers are still carried on (perhaps more than on the same extent of territory any where in Europe) and sold on terms upon which they cannot be had, in any other part of the world. And this too is true of those *growths*, which, by their nature and the labour required to raise them, come the nearest to manufactures.

As to the common-place objection to the North American settlements, that they are *in the same climate, and their produce the same as that of England*;—in the first place it is not true; it is particularly not so of the countries now likely to be added to our settlements; and of our present colonies, the products, lumber, tobacco, rice, and indigo, great articles of commerce, do not interfere with the products of England: in the next place, a man must know very little of the trade of the world, who does not know, that the greater part of it is carried on between countries whose climates differ very little. Even the trade between the different parts of these British islands is greatly superior to that between England and all the West India Islands put together.

If I have been successful in proving that a considerable commerce may and will subsist between us and our future most inland settlements in North America, notwithstanding their distance; I have more than half proved no *other inconveniency will arise* from their distance. Many men in such a country must "know," must "think," and must "care" about the country they chiefly trade with. The juridical and other connexions of government are yet a faster hold than even commercial ties, and spread, directly and indirectly, far and wide. Business to be solicited

and causes depending create a great intercourse, even where private property is *not* divided in different countries;—yet this division *will always* subsist, where different countries are ruled by the same government. Where a man has landed property both in the mother-country and the province, he will almost always live in the mother-country; this, though there were no trade, is singly a sufficient gain. It is said, that Ireland pays near a million sterling annually to its absentees in England: the balance of trade from Spain, or even Portugal, is scarcely equal to this.

Let it not be said we have *no absentees* from North America. There are many, to the writer's knowledge; and if there are at present but few of them, that distinguish themselves here by great expense, it is owing to the mediocrity of fortune among the inhabitants of the Northern colonies, and a more equal division of landed property, than in the West India islands, so that there are as yet but few large estates. But if those, who have such estates, reside upon and take care of them themselves, are they worse subjects than they would be if they lived idly in England?—Great merit is assumed for the gentlemen of the West Indies, on the score of their residing and spending their money in England. I would not depreciate that merit; it is considerable; for they might, if they pleased, spend their money in France: but the difference between their spending it here and at home is not so great. What do they spend it in when they are here, but the produce and manufactures of this country—and would they not do the same if they were at home? Is it of any great importance to the English farmer, whether the West Indian gentleman comes to London and eats his beef, pork, and tongues, fresh; or has them brought to him in the West Indies salted? Whether he eats his English cheese and butter, or drinks his English ale, at London or in Barbadoes? Is the clothier's, or the mercer's, or the cutler's, or the toyman's profit less, for their goods being worn and consumed by the same persons residing on the other side of the ocean? Would not the profits of the merchant and mariner be rather greater, and some addition made to our navigation, ships, and seamen? If the North American gentleman stays in his own country, and lives there in that degree of luxury and expense with regard to the use of British manufactures, that his fortune enables him to do; may not his example (from the imitation of superiors, so natural to mankind) spread the use of those manufactures among hundreds of families around him, and occasion a much greater demand for them, than it would do if he should remove and live in London? However this may be, if in our views of immediate advantage, it seems preferable, that the gentlemen of large fortunes in North America should reside much in England; it is what may surely be expected, as fast as such fortunes are acquired there. Their having "colleges of their own for the education of their youth," will not prevent it; a little knowledge and learning acquired increases the appetite for more, and will make the conversation of the learned on this side the water more strongly desired. Ireland has its university likewise; yet this does not prevent the immense pecuniary benefit we receive from that kingdom. And there will always be, in the conveniencies of life, the politeness, the pleasures, the magnificence of the reigning country, many other attractions besides those of learning, to draw men of substance there, where they can (apparently at least) have the best bargain of happiness for their money.

Our *trade to the West India islands*, is undoubtedly a valuable one; but whatever is the amount of it, it *has long been at a stand*. Limited as our sugar planters are by the scantiness of territory, they cannot increase much beyond their present number; and this is an evil, as I shall show hereafter, that will be little helped by our keeping Guadaloupe. —The trade to our Northern colonies is not only greater, but yearly increasing with the increase of people: and even in a greater proportion as the people increase in wealth and the ability of spending, as well as in numbers.*

* The author afterwards obtained accounts of the exports of North America, and the West India islands; by which it appeared that there had been some increase of trade to those islands, as well as to North America, though in a much less degree. The following extract from these accounts will show the amount of the exports to each, in two different terms of five years; the terms taken at ten years distance, to show the increase, viz.

First term, from 1744 *to* 1748, *inclusive.*

Northern Colonies.	*West India Islands.*
1744....£ 640,114 12 4	.....£ 796,112 17 9
1745..... 534,316 2 5	..... 503,669 19 9
1746..... 754,945 4 3	..... 472,994 16 7
1747..... 726,648 5 5	..... 856,463 16 6
1748 ..... 830,943 16 9	..... 734,095 15 3
Total, £ 3,486,961 1 2	Total, £ 3,353,337 10 10
	Difference, 122,930 10 4
	£ 3,486,968 1 2

Second term, from 1754 *to* 1758, *inclusive.*

Northern Colonies.	*West India Islands.*
1754.....1,246,615 1 11	.....685,675 3 0
1755.....1,177,848 6 10	.....694,667 13 3
1756.....1,468,720 18 10	.....733,458 16 3
1757.....1,737,924 2 10	.....776,488 0 6
1758.....1,832,948 13 10	.....877,571 19 11
Total, £ 7,414 057 4 3	Total £ 3,767,841 12 11
	Difference, 3,646,215 11 4
	£ 7,414,057 4 3
In the first term, total of West India islands,	3,353,337 10 10
In the second term, ditto	3,767,841 12 11
	Increase, only £ 404,504 2 1
In the first term, total for Northern Colonies,	3,486,968 1 2
In the second term, ditto	7,414,057 4 3
	Increase, £ 3,927,789 3 1

I have already said, that *our people in the northern colonies* double in about 25 years, exclusive of the accession of strangers. That I speak within bounds, I appeal to the authentic accounts frequently required by the board of trade, and transmitted to that board by the respective governors; of which accounts I shall select one as a sample, being that from the colony of Rhode Island* a colony that of all the others receives the least addition from strangers. For the increase of our *trade to those colonies*, I refer to the accounts frequently laid before parliament, by the officers of the customs, and to the custom-house books: from which I have also selected one account,* that of the trade from England exclusive of Scotland) to Pennsylvania;* a colony most remarkable for the plain frugal manner of living of its inhabitants, and the most suspected of carrying on manufactures, on account of the number of German artizans, who are known to have transplanted themselves into that country; though even these, in truth, when they come there, generally apply themselves to agriculture, as the surest support and most advantageous employment. By this account it appears, that the exports to that province have in 28 years, increased nearly in the proportion of 17 to 1; whereas the people themselves, who by other authentic accounts appear to double their numbers (the strangers who settle there included) in about 16 years, cannot in the 28 years have increased in a greater proportion than as 4 to 1. The additional demand then, and consumption of goods from England, of 13 parts in 17 more than the additional number would require, must be owing to this; that the people having by their industry mended their circumstances, are enabled to indulge themselves in finer clothes, better furniture, and a more general use of all our manufactures than heretofore.

In fact, the occasion for English goods in North America, and the inclination to have and use them, is, and must be for ages to come, much greater than the ability of the people to pay for them; they must therefore, as they now do, deny themselves many things they would otherwise choose to have, or increase their industry to obtain them. And thus, if they should at any time manufacture some coarse article, which on account of its bulk or some other circumstance, cannot so well be brought to them from Britain; it only enables them the better to pay for finer goods, that *otherwise* they could not indulge themselves in: so that the exports thither are not diminished by such manufacture, but rather increased. The single article of manufacture in these colonies, mentioned by the remarker, is *hats* made in New England. It is true, there have been, ever since the first settlement of that country, a few hatters there; drawn thither probably at first by the facility of getting beaver, while the woods were but

By these accounts it appears, that the exports to the West India Islands, and to the northern colonies, were in the first term nearly equal (the difference being only 12,936*l.* 10*s.* 4*d.*,) and in the second term, the exports to those islands had only increased 404,504*l.* 2*s.* 1*d.*—Whereas the increase to the northern colonies is 3,927,789*l.* 3*s.* 1*d*, almost *four millions*.

Some part of this increased demand for English goods may be ascribed to the armies and fleets we have had both in North America and the West Indies; and so much for what is consumed by the soldiery; their clothing, stores, ammunition, &c, sent from hence on account of the government, being (as is supposed) not including in these accounts of merchandise exported; but as the war has occasioned a great plenty of money in America, many of the inhabitants have increased their expense.

N. B. These accounts do not include any exports from Scotland to America, which are doubtless proportionably considerable; nor the exports from Ireland.

This is calculation carried on from where Dr. Franklin left it. For four years, from 1770 to 1773 inclusively, the same average *annual* exports to the same ports of the West Indies is 994,463*l.*, and to the same ports of the North American plantations 2,919,669*l.* But the annual averages of the first and second terms of the former were 672,668*l.* and 753,568*l.* of the latter, 697,254*l.* and 1,482,811*l.*

In ten years therefore (taking the middle years of the terms) the North American trade is found to have *doubled* the West Indian; in the next sixteen years it becomes greater by *three fold*.—With respect to itself, the North American trade in 32 years (taking the extremes of the terms) had quadrupled: while the West Indian trade increased only one half; of which increase Jamaica alone gave something more than one third, chiefly in consequence of the quiet produced by the peace with the Maroon negroes. Had the West Indian trade continued stationary, the North American trade would have quadrupled with respect to it, in 26 years; and this, notwithstanding the checks given to the latter, by their non-importation agreements and the encouragement of their own manufactures.

There had been an accession to both these trades, produced by the cessions at the treaty of Paris, not touched upon by Dr. Franklin. The average *annual* export trade, from 1770 to 1773 inclusively, to the ceded West India Islands, amounted to 258,299*l.* to the ceded North American territory it had been 280,423*l.* See Sir Charles Whitworth's State of Trade.

* *Copy of the report of governor Hopkins to the board of trade, on the numbers of people in Rhode-Island.*

In obedience to your lordship's commands, I have caused the within account to be taken by officers under oath. By it there appears to be in this colony at this time 35,939 white persons, and 4697 blacks, chiefly negroes.

In the year 1730, by order of the then lords commissioners of trade and plantations, an account was taken of the number of people in this colony, and then there appeared to be 15,302 white persons, and 2633 blacks.

Again in the year 1748, by like order, an account was taken of the number of people in this colony, by which it appears there were at that time 29,755 white persons and 4373 blacks. STEPHEN HOPKINS.

Colony of Rhode-Island Dec. 24, 1755.

* *An account of the value of the exports from England to Pennsylvania, in one year, taken at different periods, viz.*

In 1723 they amounted only to	£ 15,992	19	4
1730 they were	48,592	7	5
1737	56,690	6	7
1742	75,295	3	4
1747	82,404	17	7
1752	201,666	19	11
1757	268,426	6	6

N. B. The accounts for 1758 and 1759, were not then completed; but those acquainted with the North American trade, know that the increase in those two years had been in still greater proportion; the last year being supposed to exceed any former year by a third: and this owing to the increased ability of the people to spend, from the greater quantities of money circulating among them by the war.

little cleared, and there was plenty of those animals. The case is greatly altered now. The beaver skins are not now to be had in New England, but from very remote places and at great prices. The trade is accordingly declining there; so that, far from being able to make hats in any quantity for exportation, they cannot supply their home demand; and it is well known, that some thousand dozens are sent thither yearly from London, Bristol, and Liverpool, and sold cheaper than the inhabitants can make them of equal goodness. In fact, the colonies are so little suited for establishing of manufactures, that they are continually losing the few branches they accidentally gain. The working brasiers, cutlers, and pewterers, as well as hatters, who have happened to go over from time to time and settle in the colonies, gradually drop the working part of their business, and import their respective goods from England, whence they can have them cheaper and better than they can make them. They continue their shops indeed, in the same way of dealing; but become *sellers* of brasiery, cutlery, pewter, hats, &c. brought from England, instead of being *makers* of those goods.

5. *The American colonies* not dangerous *in their nature to Great Britain.*

Thus much as to the apprehension of our colonies becoming useless to us. I shall next consider the other supposition, that their growth may render them *dangerous*.—Of this, I own, I have not the least conception, when I consider that we have already *fourteen separate governments* on the maritime coast of the continent; and, if we extend our settlements, shall probably have as many more behind them on the inland side. Those we now have are not only under different governors, but have different forms of government, different laws, different interests, and some of them different religious persuasions, and different manners.—Their jealousy of each other is so great, that however necessary an union of the colonies has long been, for their common defence and security against their enemies, and how sensible soever each colony has been that of necessity; yet they have never been able to effect such an union among themselves; nor even to agree in requesting the mother-country to establish it for them. Nothing but the immediate command of the crown has been able to produce even the imperfect union, but lately seen there, of the forces of some colonies. If they could not agree to unite for their defence against the French and Indians, who were perpetually harassing their settlements, burning their villages, and murdering their people; can it reasonably be supposed there is any danger of their uniting against their own nation, which protects and encourages them, with which they have so many connexions and ties of blood, interest, and affection, and which, it is well known, they all love much more than they love one another?

In short, there are so many causes that must operate to prevent it, that I will venture to say, an union amongst them for such a purpose is not merely improbable, it is impossible. And if the union of the whole is impossible, the attempt of a part must be madness; as those colonies that did not join the rebellion would join the mother-country in suppressing it. When I say such an union is impossible, I mean, without the most grievous tyranny and oppression. People who have property in a country which they may lose, and privileges which they may endanger, are generally disposed to be quiet, and even to bear much, rather than hazard all. While the government is mild and just, while important civil and religious rights are secure, such subjects will be dutiful and obedient. *The waves do not rise but when the winds blow.*

What such an administration as the duke of Alva's in the Netherlands might produce, I know not; but this I think I have a right to deem impossible. And yet there were two very manifest differences between that case, and ours; and both are in our favour. The *first*, that Spain had already united the seventeen provinces under one visible government, though the states continued independent: the *second*, that the inhabitants of those provinces were of a nation not only different from, but utterly unlike the Spaniards. Had the Netherlands been peopled from Spain, the worst of oppression had probably not provoked them to wish a separation of government. It might, and probably would, have ruined the country; but would never have produced an independent sovereignty. In fact, neither the very worst of governments, the worst of politics in the last century, nor the total abolition of their remaining liberty, in the provinces of Spain itself, in the present, have produced any independency in Spain, that could be supported. The same may be observed of France.

And let it not be said, that the neighbourhood of these to the seat of government has prevented a separation. While our strength at sea continues, the banks of the Ohio (in point of easy and expeditious conveyance of troops) are nearer to London, than the remote parts of France and Spain to their respective capitals; and much nearer than Connaught and Ulster were in the days of queen Elizabeth. Nobody foretels the dissolution of the Russian monarchy from its extent; yet I will venture to say, the eastern parts of it are already much more inaccessible from Petersburgh, than the country on the Mississippi is from London; I mean, more men, in less time, might be conveyed to the latter than

the former distance. The rivers Oby, Jenesea, and Lena, do not facilitate the communication half so well by their course, nor are they half so practicable as the American rivers. To this I shall only add the observation of Machiaval, in his Prince; that a government seldom long preserves its dominion over those who are foreigners to it; who, on the other hand, fall with great ease, and continue inseparably annexed to the government of their own nation: which he proves by the fate of the English conquests in France. Yet with all these disadvantages, so difficult is it to overturn an established government, that it was not without the assistance of France and England, that the United Provinces supported themselves: which teaches us, that

6. *The French remaining in Canada, an encouragament to disaffections in the British Colonies.—If they prove a* check, *that check of the most barbarous nature.*

If the visionary danger of independence in our colonies is to be feared; nothing is more likely to render it substantial than the neighbourhood of foreigners, at enmity with the sovereign governments, capable of giving either aid,* *or an* asylum, *as the event shall require.* Yet against even these disadvantages, did Spain preserve almost ten provinces, merely through their want of union; which indeed could never have taken place among the others, but for causes, some of which are in our case impossible, and others it is impious to suppose possible.

The Romans well understood that policy, which teaches the security arising to the chief government from separate states among the governed; when they restored the liberties of states of Greece (oppressed but united under Macedon) by an edict, that every state should live under its own laws. They did not even name a governor. Independence of each other, and separate interests (though among a people united by common manners, language, and I may say religion; inferior neither in wisdom, bravery, nor their love of liberty, to the Romans themselves;) was all the security the sovereigns wished for their sovereignty. It is true, they did not call themselves sovereigns; they set no value on the title; they were contented with possessing the thing. And possess it they did, even without a standing army: (what can be a stronger proof of the security of their possession?) And yet by a policy, similar to this throughout, was the Roman world subdued and held: a world composed of above an hundred languages, and sets of manners, different from those of their masters. Yet this dominion was unshakeable, till the loss of liberty and corruption of manners in the sovereign state overturned it.

But what is the prudent policy inculcated by the remarker to obtain this end, security of dominion over our colonies? It is, to leave the French *in* Canada, to "check" their growth; *for otherwise, our people may increase infinitely from all causes.*" We have already seen in what manner the French and their Indians check the growth of our colonies. It is a modest word, this *check*, for massacreing men, women, and children! The writer would, if he could, hide from himself as well as from the public, the horror arising from such a proposal, by couching it in general terms: it is no wonder he thought it a "subject not fit for discussion" in his letter; he recommends it as "a point that should be the constant object of the minister's attention!" But if Canada is restored on this principle, will not Britain be guilty of all the blood to be shed, all the murders to be committed, in order to check this dreaded growth of our own people? Will not this be telling the French in plain terms, that the horrid barbarities they perpetrate with Indians on our colonists are agreeable to us; and that they need not apprehend the resentment of a government, with whose views they so happily concur? Will not the colonies view it in this light? Will they have reason to consider themselves any longer as subjects and children, when they find their cruel enemies hallooed upon them by the country from whence they sprung; the government that owes them protection, as it requires their obedience? Is not this the most likely means of driving them into the arms of the French, who can invite them by an offer of security, their own government chooses not to afford them! I would not be thought to insinuate, that the remarker wants humanity. I know how little many good-natured persons are affected by the distresses of people at a distance, and whom they do not know. There are even those, who, being present, can sympathize sincerely with the grief of a lady on the sudden death of a favourite bird; and yet can read of the sinking of a city in Syria with very little concern. If it be, after all, thought necessary to check the growth of our colonies, give me leave to propose a method less cruel. It is a method of which we have an example in Scripture. The murder of husbands, of wives, of brothers, sisters and children, whose pleasing society has been for some time enjoyed, affects deeply the respective surviving relations; but grief for the death of a child just born is short, and easily supported. The method I mean is that which was dictated by

*An idea was current during the war of independence, that the revolt would not have taken place if the French had been left possessed of Canada at the peace of 1763. On the other hand, those who since 1754 looked to future independence considered the surrender by the French as promoting it. Canada, during the war of 1812—15 was so heavy a weight on the United States, that in case of a future war it must be looked to.

the Egyptian policy, when the "infinite increase" of the children of Israel was apprehended as dangerous to the state.* Let an act of parliament then be made, enjoining the colony midwives to stifle in the birth every third or fourth child. By this means you may keep the colonies to their present size. And if they were under the hard alternative of submitting to one or the other of these schemes for checking their growth, I dare answer for them, they would prefer the latter.

But all this debate about the propriety or impropriety of keeping or restoring Canada is possibly too early. We have taken the capital indeed, but the country is yet far from being in our possession; and perhaps never will be: for if our ministers are persuaded by such counsellors as the remarker, that the French there are "not the worst of neighbours," and that if we had conquered Canada, we ought, for our own sakes, to restore it, as a check to the growth of our colonies; I am then afraid we shall never take it. For there are many ways of avoiding the completion of the conquest, that will be less exceptionable and less odious than the giving it up.

7. *Canada easily peopled*, without draining Great Britain *of any of its inhabitants.*

The objection I have often heard, that if we had Canada we could not people it, without draining Britain of its inhabitants, is founded on ignorance of the nature of population in new countries. When we first began to colonize in America, it was necessary to send people, and to send seed-corn; but it is not now necessary that we should furnish, for a new colony, either one or the other. The annual increment alone of our present colonies, without diminishing their numbers, or requiring a man from hence, is sufficient in ten years to fill Canada with double the number of English that it now has of French inhabitants. Those who are protestants among the French will probably choose to remain under the English government; many will choose to remove, if they can be allowed to sell their lands, improvements, and effects: the rest in that thin-settled country will in less than half a century, from the crowds of English settling round and among them, be blended and incorporated with our people both in language and manners.

8. *The merits of Guadaloupe to Great Britain* over-valued *yet likely to be paid* much dearer for, *than Canada.*

In Guadaloupe the case is somewhat different; and though I am far from thinking we have sugar-land enough, I cannot think Guadaloupe is so desirable an increase of it, as other objects the enemy would probably be infinitely more ready to part with. A country, *fully inhabited* by any nation, is no proper possession for another of different languages, manners, and religion. It is hardly ever tenable at less expence than it is worth. But the isle of *Cayenne, and its appendix, Equinoctial-France*, having but very few inhabitants, and these therefore easily removed, would indeed be an acquisition every way suitable to our situation and desires. This would hold all that migrate from Barbadoes, the Leeward Islands, or Jamaica. It would certainly recall into an English government (in which there would be room for millions) all who have before settled or purchased in Martinico, Guadaloupe, Santa Cruz, or St John's; except such as know not the value of an English government, and such I am sure are not worth recalling.

But should we keep Guadaloupe, we are told it would *enable us to export* 300,000*l. in sugars.* Admit it to be true, though perhaps the amazing increase of English consumption might stop most of it here,—to whose profit is this to redound? To the profit of the French inhabitants of the island: except a small part, that should fall to the share of the English purchasers, but whose whole purchase money must first be added to the wealth and circulation of France. I grant, however, much of this 300,000*l.* would be expended in British manufactures. Perhaps too, a few of the landowners of Guadaloupe might dwell and spend their fortunes in Britain (though probably much fewer than of the inhabitants of North America.) I admit the advantage arising to us from these circumstances (as far as they go) in the case of Guadaloupe, as well as in that of our other West India settlements. Yet even this consumption is little better than that of an allied nation would be, who should take our manufactures and supply us with sugar, and put us to no great expense in defending the place of growth. But though our own colonies expend among us almost the whole produce of our sugar, *can we, or ought we* to promise ourselves this will be the case of Guadaloupe? One 100,000*l.* will supply them with British manufactures; and supposing we can effectually prevent the introduction of those of France (which is morally impossible in a country used to them) the other 200,000*l.* will still be spent in France, in the education of their children and support of themselves; or else be laid up there, where they will always think their home to be.

Besides this consumption of British manufactures, *much is said of the benefit we shall have from the* situation of Guadaloupe; and we are told of a trade to the Caraccas and

* And Pharaoh said unto his people, behold the people of the children of Israel are more and mightier than we; come on, let us deal wisely with them, lest they multiply, and it come to pass, that when there falleth out any war, they join also unto our enemies and fight against us, and so get them up out of the land. And the king spake to the Hebrew midwives, &c.—Exodus, chap. 1.

Spanish Main. In what respect Guadaloupe is better situated for this trade than Jamaica, or even of our other islands, I am at a loss to guess. I believe it to be not so well situated for that of the windward coast, as Tobago and St. Lucia; which in this, as well as other respects, would be more valuable possessions, and which, I doubt not, the peace will secure to us. Nor is it nearly so well situated for that of the rest of the Spanish Main as Jamaica. As to the greater safety of our trade by the possession of Guadaloupe, experience has convinced us, that in reducing a single island, or even more, we stop the privateering business but little. Privateers still subsist, in equal if not greater numbers, and carry the vessels into Martinico, which before it was more convenient to carry into Guadaloupe. Had we all the Caribbees, it is true, they would in those parts be without shelter.

Yet, upon the whole, I suppose it to be a doubtful point, and well worth consideration, whether our obtaining possession of all the Caribbees would be more than a temporary benefit; as it would necessarily soon fill the French part of Hispaniola with French inhabitants, and thereby render it five times more valuable in time of peace, and little less than impregnable in time of war, and would probably end in a few years in the uniting the whole of that great and fertile island under a French government. It is agreed on all hands, that our conquest of St. Christophers, and driving the French from thence, first furnished Hispaniola with skilful and substantial planters, and was consequently the first occasion of its present opulence. On the other hand, I will hazard an opinion, that valuable as the French possessions in the West Indies are, and undeniable as the advantages they derive from them, there is somewhat to be weighed in the opposite scale. They cannot at present make war with England, without exposing those advantages, while divided among the numerous islands they now have, much more than they would, were they possessed of St. Domingo only; their own share of which would, if well cultivated, grow more sugar than is now grown in all their West-India islands.

I have before said, I do not deny the utility of the conquest, or even of our future possession of Guadaloupe, if not bought too dear. The trade of the West Indies is one of our most valuable trades. Our possessions there deserve our greatest care and attention. So do those of North America. I shall not enter into the invidious task of comparing their due estimation. It would be a very long, and a very disagreeable one, to run through every thing material on this head. It is enough to our present point, if I have shown, that the value of North America is capable of an immense increase, by an acquisition and measures, that must necessarily have an effect the direct contrary of what we have been industriously taught to fear; and that Guadaloupe is, in point of advantage, but a very small addition to our West-India possessions; rendered many ways less valuable to us, than it is to the French, who will probably set more value upon it, than upon a country [Canada] that is much more valuable to us than to them.

There is a great deal more to be said on all the parts of these subjects; but as it would carry me into a detail, that I fear would tire the patience of my readers, and which I am not without apprehensions I have done already, I shall reserve what remains till I dare venture again on the indulgence of the public.

PLAIN TRUTH;

Or, Serious Considerations on the present state of the city of Philadelphia, and province of Pennsylvania. By a Tradesman of Philadelphia.

Capta urbe, nihil ût reliqui victis. Sed, per deos immortales, vos ego apello, qui semper domos, villas, signa, tabulas vestras, tantæ æstimationis fecistis; ai ista, cujuscumque modi sint, quæ amplexamini, retinere, si voluptatibus vestris otium præbere vultis; expergiscimini aliquando, et capessite rempublicam. Non agitur nunc de sociorum injuriis; *libertas et anima* nostra in dubio est. Dux hostium cum exercitu supra caput est. Vos cunctamini etiam nunc, et dubitatis quid faciatis? Scilicet, res ipsa aspera est, sed vos non timetis eam. Imo vero maxime; sed inertiâ et mollitiâ animi, alius alium expectantes, cunctamini; videlicit, diis immortalibus confisi, qui hanc rempublicam in maximis periculis servavere *non votis, neque supplicüs mulieribus, auxilia deorum parantur:* vigilando, agendo, bene consulendo, prospere omnia cedunt. Ubi socordiæ tete atque ignaviæ tradideris, nequicquam deos implores; irati, infestique sunt. M. POR. CAT. IN SALUST.

It is said, the wise Italians make this proverbial remark on our nation, viz. The English *feel*, but they do not *see*. That is, they are sensible of inconveniences when they are present, but do not take sufficient care to prevent them: their natural courage makes them too little apprehensive of danger, so that they are often surprised by it, unprovided of the proper means of security. When it is too late, they are sensible of their imprudence; after great fires, they provide buckets and engines: after a pestilence, they think of keeping clean their streets and common sewers: and when a town has been sacked by their enemies they provide for its defence, &c. This kind of *after-wisdom* is indeed so common with us, as to occasion the vulgar, though very significant saying, *When the steed is stolen, you shut the stable door.*

But the more insensible we generally are of public danger, and indifferent when warned of it, so much the more freely, openly, and earnestly, ought such as apprehend it to speak their sentiments; that, if possible, those who seem to sleep may be awakened, to think of

some means of avoiding or preventing the mischief, before it be too late.

Believing therefore, that it is my *duty*, I shall honestly speak my mind in the following paper.

War, at this time, rages over a great part of the known world; our newspapers are weekly filled with fresh accounts of the destruction it every where occasions. Pennsylvania, indeed, situate in the centre of the colonies, has hitherto enjoyed profound repose; and though our nation is engaged in a bloody war, with two great and powerful kingdoms, yet, defended, in a great degree, from the French, on the one hand, by the northern provinces, and from the Spaniards, on the other, by the southern, at no small expense to each, our people have, till lately, slept securely in their habitations.

There is no British colony, excepting this, but has made some kind of provision for its defence; many of them have therefore never been attempted by an enemy; and others, that were attacked, have generally defended themselves with success. The length and difficulty of our bay and river have been thought so effectual a security to us, that hitherto no means have been entered into, that might discourage an attempt upon us, or prevent its succeeding.

But whatever security this might have been while both country and city were poor, and the advantage to be expected scarce worth the hazard of an attempt, it is now doubted, whether we can any longer safely depend upon it. Our wealth, of late years much increased, is one strong temptation, our defenceless state another, to induce an enemy to attack us; while the acquaintance they have lately gained with our bay and river, by means of the prisoners and flags of truce they have had among us; by spies which they almost every where maintain, and perhaps from traitors among ourselves; with the facility of getting pilots to conduct them; and the known absence of ships of war, during the greatest part of the year, from both Virginia and New York, ever since the war began, render the appearance of success to the enemy far more promising, and therefore highly increase our danger.

That our enemies may have spies abroad, and some even in these colonies, will not be made much doubt of, when it is considered, that such has been the practice of all nations in all ages, whenever they were engaged, or intended to engage, in war. Of this we have an early example in the book of Judges (too pertinent to our case, and therefore I must beg leave a little to enlarge upon it) where we are told, *Chap.* xviii. 2. That *the children of Dan sent of their family five men from their coasts to spie out the land, and search it, saying, Go, search the land.* These Danites it seems were at this time not very orthodox in their religion, and their spies met with a certain idolatrous priest of their own persuasion, ver. 3, and they said to him, *Who brought thee hither? What makest thou in this place? And what hast thou here?* [Would to God no such priests were to be found among us.] And they said unto him, ver. 5.—*Ask counsel of God, that we may know, whether our way which we go shall be prosperous: and the priest said unto them, Go in peace; before the Lord is your way wherein you go.* [Are there no priests among us, think you, that might, in the like case, give an enemy as good encouragement? It is well known, that we have numbers of the same religion with those, who of late encouraged the French to invade our mother-country.] *And they came,* verse 7, *to Laish, and saw the people that were therein, how they dwelt* CARELESS, *after the manner of the Zidonians,* QUIET *and* SECURE. They *thought* themselves secure, no doubt; and as they *never had been* disturbed, vainly imagined they *never should.* It is not unlikely, that some might see the danger they were exposed to by living in that *careless* manner; but that, if these publicly expressed their apprehensions, the rest reproached them as timorous persons, wanting courage or confidence in their gods, who (they might say) had hitherto protected them. But the spies, verse 8, returned, and said to their countrymen, verse 9, *Arise, that we may go up against them; for we have seen the land, and behold it is very good! And are ye still? Be not slothful to go.* Verse 10, *when ye go, ye shall come to a people* SECURE: [that is, a people that apprehend no danger, and therefore have made no provision against it; great encouragement this!] *and to a large land, and a place where there is no want of any thing.* What could they desire more? Accordingly we find, in the following verses, that *six hundred men* only, *appointed with weapons of war,* undertook the conquest of this *large land;* knowing that 600 men, armed and disciplined, would be an over-match perhaps for 60,000, unarmed, undisciplined, and off their guard. And when they went against it, the idolatrous priest, verse 17, *with his graven image, and his ephod, and his teraphim, and his molten image,* [plenty of superstitious trinkets] joined with them, and, no doubt, gave them all the intelligence and assistance in his power; his heart, as the text assures us, *being glad,* perhaps for reasons more than one. And now, what was the fate of the poor Laish! The 600 men being arrived, found, as the spies had reported, a people QUIET and SECURE, verse 20, 21. *And they smote them with the edge of the sword, and burnt the city with* FIRE; *and there was no* DELIVERER, *because it was far from Zidon.*—Not so far from Zidon, however, as

Pennsylvania is from Britain; and yet we are, if possible, more *careless* than the people of Laish! As the Scriptures are given for our reproof, instruction, and warning, may we make a due use of this example, before it be too late!

And is our *country*, any more than our city, altogether free from danger? Perhaps not. We have, it is true, had a long peace with the Indians: but it is a long peace indeed, as well as a long lane, that has no ending. The French know the power and importance of the Six Nations, and spare no artifice, pains, or expense to gain them to their interest. By their priests they have converted many to their religion, and these have openly espoused their cause. The rest appear irresolute what part to take; no persuasions, though enforced with costly presents, having yet been able to engage them generally on our side, though we had numerous forces on their borders, ready to second and support them. What then may be expected, now those forces are, by orders from the crown, to be disbanded, when our boasted expedition is laid aside, through want (as it may appear to them) either of strength or courage; when they see, that the French and their Indians, boldly, and with impunity, ravage the frontiers of New York, and scalp the inhabitants; when those few Indians, that engaged with us against the French, are left exposed to their resentment: when they consider these things, is there no danger that, through disgust at our usage, joined with fear of the French power, and greater confidence in their promises and protection than in ours, they may be wholly gained over by our enemies, and join in the war against us? If such should be the case, which God forbid, how soon may the mischief spread to our frontier countries? And what may we expect to be the consequence, but desertion of plantations, ruin, bloodshed, and confusion!

Perhaps some in the city, towns, and plantations near the river, may say to themselves, "An Indian war on the frontiers will not affect us; the enemy will never come near our habitations; let those concerned take care of themselves." And others who live in the country, when they are told of the danger the city is in from attempts by sea, may say, "What is that to us? The enemy will be satisfied with the plunder of the town, and never think it worth his while to visit our plantations: let the town take care of itself." These are not the mere suppositions, for I have heard some talk in this strange manner. But are these the sentiments of true Pennsylvanians, of fellow-countrymen, or even of men, that have common sense or goodness? Is not the whole province one body, united by living under the same laws, and enjoying the same privileges? Are not the people of city and country connected as relations, both by blood and marriage, and in friendships equally dear? Are they not likewise united in interest, and mutually useful and necessary to each other? When the feet are wounded, shall the head say, it is not me; I will not trouble myself to contrive relief! Or if the head is in danger, shall the hands say, we are not affected, and therefore will lend no assistance! No. For so would the body be easily destroyed: but when all parts join their endeavours for its security, it is often preserved. And such should be the union between the country and the town; and such their mutual endeavours for the safety of the whole. When New England, a distant colony, involved itself in a grievous debt to reduce Cape Breton, we freely gave four thousand pounds for *their* relief. And at another time, remembering that Great Britain, still more distant, groaned under heavy taxes in supporting the war, we threw in our mite to their assistance, by a free gift of three thousand pounds: and shall country and town join in helping strangers (as those comparatively are) and yet refuse to assist each other?

But whatever different opinions we have of our security in other respects, our TRADE, all seem to agree, is in danger of being ruined in another year. The great success of our enemies, in two different cruizes this last summer in our bay, must give them the greatest encouragement to repeat more frequently their visits, the profit being almost certain, and the risk next to nothing. Will not the first effect of this be, an enhancing of the price of all foreign goods to the tradesman and farmer, who use or consume them? For the rate of insurance will increase, in proportion to the hazard of importing them; and in the same proportion will the price of those goods increase. If the price of the tradesman's work, and the farmer's produce, would increase equally with the price of foreign commodities, the damage would not be so great: but the direct contrary must happen. For the same hazard or rate of insurance, that raises the price of what is imported, must be deducted out of, and lower the price of what is exported. Without this addition and deduction, as long as the enemy cruize at our capes, and take those vessels that attempt to *go out*, as well as those that endeavour to *come in*, none can afford to trade, and business must be soon at a stand. And will not the consequences be, a discouragement of many of the vessels that used to come from other places to purchase our produce, and thereby a turning of the trade to ports that can be entered with less danger, and capable of furnishing them with the same commodities, as New York, &c. a lessening of business to every shopkeeper, together with multitudes of bad debts, the high rate of goods discouraging the buyers, and the low rates of their labour and produce render-

ing them unable to pay for what they had bought; loss of employment to the tradesman, and bad pay for what little he does; and lastly, loss of many inhabitants, who will retire to other provinces not subject to the like inconveniences; whence a lowering of the value of lands, lots, and houses.

The enemy, no doubt, have been told, that the people of Pennsylvania are quakers, and against all defence, from a principle of conscience; this, though true of a part, and that a small part only of the inhabitants, is commonly said of the whole; and what may make it look probable to strangers is, that in fact, nothing is done by any part of the people towards their defence. But to refuse defending one's self, or one's country, is so unusual a thing among mankind, that possibly they may not believe it, till by experience, they find they can come higher and higher up our river, seize our vessels, land and plunder our plantations and villages, and retire with their booty unmolested. Will not this confirm the report, and give them the greatest encouragement to strike one bold stroke for the city, and for the whole plunder of the river!

It is said by some, that the expense of a vessel, to guard our trade, would be very heavy, greater than perhaps all the enemy can be supposed to take from us at sea would amount to; and that it would be cheaper for the government to open an insurance office, and pay all losses. But is this right reasoning? I think not; for what the enemy takes is clear loss to us, and gain to him; increasing his riches and strength, as much as it diminishes ours, so making the difference double; whereas the money, paid our own tradesmen for building and fitting out a vessel of defence, remains in the country, and circulates among us; what is paid to the officers and seamen, that navigate her, is also spent ashore, and soon gets into other hands; the farmer receives the money for her provisions, and on the whole nothing is clearly lost to the country but her wear and tear, or so much as she sells for at the end of the war less than her first cost. This loss, and a trifling one it is, is all the inconvenience; but how many and how great are the conveniences and advantages! and should the enemy, through our supineness and neglect to provide for the defence both of our trade and country, be encouraged to attempt this city, and after plundering us of our goods, either *burn it*, or put it to ransom, how great would that loss be! besides the confusion, terror, and distress, so many hundreds of families would be involved in!

The thought of this latter circumstance so much affects me, that I cannot forbear expatiating somewhat more upon it. You have, my dear countrymen, and fellow-citizens, riches to tempt a considerable force to unite and attack you, but are under no ties or engagements, to unite for your defence. Hence, on the first alarm, *terror* will spread over all; and as no man can with certainty depend that another will stand by him, beyond doubt very many will seek safety by a speedy flight. Those, that are reputed rich, will flee through fear of torture, to make them produce more than they are able. The man, that has a wife and children, will find them hanging on his neck, beseeching him with tears to quit the city, and save his life, to guide and protect them in that time of general desolation and ruin. All will run into confusion, amidst cries and lamentations, and the hurry and disorder of departers, carrying away their effects. The few that remain will be unable to resist. *Sacking* the city will be the first, and *burning* it, in all probability, the last act of the enemy. This, I believe, will be the case, if you have timely notice. But what must be your condition, if suddenly surprised, without previous alarm, perhaps in the night! Confined to your houses, you will have nothing to trust to but the enemy's mercy. Your best fortune will be, to fall under the power of commanders of king's ships, able to control the mariners; and not into the hands of *licentious privateers*. Who can, without the utmost horror, conceive the miseries of the latter! when your persons, fortunes, wives, and daughters shall be subject to the wanton and unbridled rage, rapine, and lust, of negroes, mulattoes, and others, the vilest and most abandoned of mankind.* A dreadful scene! which some may represent as exaggerated. I think it my duty to warn you: judge for yourselves.

It is true, with very little notice, the rich may shift for themselves. The means of speedy flight are ready in their hands; and with some previous care to lodge money and effects in distant and secure places, though they should lose much, yet enough may be left them, and to spare. But most unhappily circumstanced indeed are we, the middling people, the tradesmen, shopkeepers, and farmers of the province and city! We cannot all fly with our families; and if we could, how shall we subsist! No; we and they, and what little we have gained by hard labour and industry, must bear the brunt: the weight of contributions, extorted by the enemy (as it is of taxes among ourselves) must be surely borne by us. Nor can it be avoided, as we

* By accounts, the ragged crew of the Spanish privateer that plundered Mr. Liston's, and another plantation, a little below Newcastle, was composed of such as these. The *honour* and *humanity* of their officers may be judged of, by the treatment they gave poor captain Brown, whom they took with Martin's ship in returning from their cruize. Because he bravely defended himself and vessel longer than they expected, for which every generous enemy would have esteemed him, did they, after he had struck and submitted, barbarously *stab* and *murder* him, though on his knees begging quarter.

stand at present; for though we are numerous, we are quite defenceless, having neither forts, arms, union, nor discipline. And though it were true, that our trade might be protected at no great expense, and our country and our city easily defended, if proper measures were but taken; yet, who shall take these measures? Who shall pay that expense? On whom may we fix our eyes with the least expectation, that they will do any thing for our security? Should we address that wealthy and powerful body of people, who have ever since the war governed our elections, and filled almost every seat in our assembly; should we entreat them to consider, if not as friends, at least as legislators, that protection is as truly due from the government to the people, as *obedience* from the people to the government; and that if, on account of their religious scruples, they themselves could do no act for our defence, yet they might retire, relinquish their power for a season, quit the helm to freer hands during the present tempest, to hands, chosen by their own interest too, whose prudence and moderation, with regard to them, they might safely confide in; secure, from their own native strength, of resuming again their present station, whenever it shall please them: should we remind them, that the public money, raised *from all*, belongs *to all*; that since they have, for their own ease, and to secure themselves in the quiet enjoyment of their religious principles (and may they long enjoy them) expended such large sums to oppose petitions, and engage favourable representations of their conduct, if they themselves could by no means be free to appropriate any part of the public money for our defence; yet it would be no more than justice, to spare us a reasonable sum for that purpose, which they might easily give to the king's use as heretofore, leaving all the appropriation to others, who would faithfully apply it as we desired: should we tell them, that though the treasury be at present empty, it may soon be filled by the outstanding public debts collected, or at least credit might be had for such a sum, on a single vote of the assembly: that though *they* themselves may be resigned and easy under this naked, defenceless state of the country, it is far otherwise with a very great part of the people; with *us*, who can have no confidence that God will protect those, that neglect the use of rational means for their security; nor have any reason to hope, that our losses, if we should suffer any, may be made by collections in our favour at home. Should we conjure them by all the ties of neighbourhood, friendship, justice, and humanity, to consider these things; and what distraction, misery, and confusion, what desolation and distress, may possibly be the effect of their *unseasonable* predominancy and perseverance; yet all would be in vain: for they have already been, by great numbers of the people, petitioned in vain. Our late governor did for years solicit, request, and even threaten them in vain. The council have since twice remonstrated to them in vain. Their religious prepossessions are unchangeable, their obstinacy invincible. Is there then the least hope remaining, that from that quarter any thing should arise for our security!

And is our prospect better, if we turn our eyes to the strength of the opposite party, those great and rich men, merchants, and others, who are ever railing at quakers for doing what their principles seem to require, and what in charity we ought to believe they think their duty, but take no one step themselves for the public safety. They have so much wealth and influence, if they would use it, that they might easily, by their endeavours and example, raise a military spirit among us, make us fond, studious of, and expert in, martial discipline, and effect every thing that is necessary, under God, for our protection. But *envy* seems to have taken possession of their hearts, and to have eaten out and destroyed every generous, noble, public spirited sentiment. *Rage*, at the disappointment of their little schemes for power, gnaws their souls, and fills them with such cordial hatred to their opponents, that every proposal, by the execution of which *those* may receive benefit as well as themselves, is rejected with indignation. "What," say they, "shall we lay out our money to protect the trade of quakers? Shall we fight to defend quakers? No; let the trade perish, and the city burn; let what will happen, we shall never lift a finger to prevent it." Yet the quakers have *conscience* to plead for their resolution not to fight, which these gentlemen have not. Conscience with you, gentlemen, is on the other side of the question: conscience enjoins it as a *duty* on you (and indeed I think it such on every man) to defend your country, your friends, your aged parents, your wives, and helpless children: and yet you resolve not to perform this duty, but act contrary to your own consciences, because the quakers act according to theirs. Till of late, I could scarce believe the story of him, who refused to pump in a sinking ship, because one on board, whom he hated, would be saved by it as well as himself. But such, it seems, is the unhappiness of human nature, that our passions, when violent, often are too hard for the united force of reason, duty, and religion.

Thus unfortunately are we circumstanced at this time, my dear countrymen and fellow-citizens; we, I mean, the middling people; the farmers, shopkeepers, and tradesmen of this city and country. Through the dissentions of our leaders, through mistaken principles of religion, joined with a love of worldly

power, on the one hand; through pride, envy, and implacable resentment on the other; our lives, our families, and little fortunes, dear to us as any great man's can be to him, are to remain continually exposed to destruction, from an enterprising, cruel, now well-informed, and by success encouraged, enemy. It seems as if Heaven, justly displeased at our growing wickedness, and determined to punish* this once-favoured land, had suffered our chiefs to engage in these foolish and mischievous contentions, for *little posts* and *paltry distinctions*, that our hands might be bound up, our understandings darkened and misled, and every means of our security neglected. It seems as if our greatest men, our *cives nobilissimi*† of both parties, had sworn the ruin of the country, and invited the French, our most inveterate enemy, to destroy it. Where then shall we seek for succour and protection? The government we are immediately under denies it to us; and if the enemy comes, we are *far from Zidon, and there is no deliverer near*. Our case is dangerously bad; but perhaps there is yet a remedy, if we have but the prudence and the spirit to apply it.

If this new flourishing city, and greatly improving colony is destroyed and ruined, it will not be for want of numbers of inhabitants able to bear arms in its defence. It is computed, that we have at least (exclusive of the quakers) sixty thousand fighting men, acquainted with fire arms, many of them hunters and marksmen, hardy and bold. All we want is order, discipline, and a few cannon. At present we are like the separate filaments of flax before the thread is formed, without strength, because without connexion; but UNION would make us strong, and even formidable, though the *great* should neither help nor join us; though they should even oppose our uniting, from some mean views of their own, yet, if we resolve upon it, and it pleases God to inspire us with the necessary prudence and vigour, it *may* be effected. Great numbers of our people are of British race, and though the fierce fighting animals of those happy islands are said to abate their native fire and intrepidity, when removed to a foreign clime, yet with the people it is not so; our neighbours of New England afford the world a convincing proof, that Britons, though a hundred years transplanted, and to the remotest part of the earth, may yet retain, even to the third and fourth descent, that zeal for the public good, that military prowess, and that undaunted spirit, which has in every age distinguished their nation. What numbers have we likewise of *those brave people*, whose fathers in the last age made so glorious a stand for our religion and liberties, when invaded by a powerful French army, joined by Irish Catholics, under a bigoted popish king! Let the memorable siege of Londonderry, and the signal actions of the Iniskillinners, by which the heart of that prince's schemes was broken, be perpetual testimonies of the courage and conduct of those noble warriors! Nor are there wanting amongst us, thousands of *that warlike* nation, whose sons have ever since the time of Cæsar maintained the character he gave their fathers, of joining the most *obstinate courage* to all the other military virtues: I mean the brave and steady Germans. Numbers of whom have actually born arms in the service of their respective princes; and if they fought well for their tyrants and oppressors, would they refuse to unite with us in defence of their newly acquired and most precious liberty and property? Were this union formed, were we once united, thoroughly armed and disciplined, was every thing in our power done for our security, as far as human means and foresight could provide, we might then, with more propriety, humbly ask the assistance of Heaven, and a blessing on our lawful endeavours. The very fame of our strength and readiness would be a means of discouraging our enemies; for it is a wise and true saying, that *one sword often keeps another in the scabbard*. The way to secure peace is to be prepared for war. They, that are on their guard, and appear ready to receive their adversaries, are in much less danger of being attacked, than the supine, secure, and negligent. We have yet a winter before us, which may afford a good and almost sufficient opportunity for this, if we seize and improve it with a becoming vigour. And if the hints contained in this paper are so happy as to meet with a suitable disposition of mind in his countrymen, and fellow-citizens, the writer of it will in a few days lay before them a form of ASSOCIATION for the purposes herein mentioned, together with a practicable scheme for raising the money necessary for the defence of our trade, city, and country, without laying a burden on any man.

May the God of wisdom, strength, and power, the Lord of the armies of Israel, inspire us with prudence in this time of danger, take away from us all the seeds of contention and division, and unite the hearts and counsels of all of us, of whatever sect or nation, in one bond of peace, brotherly love, and generous public spirit; may he give us strength and resolution to amend our lives, and remove from among us every thing that

* When God determined to punish his chosen people, the inhabitants of Jerusalem, who though breakers of his other laws, were scrupulous observers of that ONE, which required keeping holy the Sabbath-day: he suffered even the strict observation of that command to be their ruin: for Pompey, observing that they then obstinately refused to fight, made a general assault on that day, took the town, and butchered them with as little mercy as he found resistance.—JOSEPHUS.

† Conjuravere cives nobilissimi patriam incendere; GALLORUM GENTEM, infestissimiam nomini Romano, ad bellum arcessunt.—CAT. IN. SALUST.

is displeasing to him; afford us his most gracious protection, confound the designs of our enemies, and give peace in all our borders, is the sincere prayer of

A TRADESMAN OF PHILADELPHIA.

A comparison of the conduct of the Ancient Jews, and of the Anti-federalists in the United States of America.

A ZEALOUS advocate for the proposed federal constitution in a public assembly said, that "the repugnance of a great part of mankind to good government was such, that he believed, that if an angel from heaven was to bring down a constitution, formed there for our use, it would nevertheless meet with violent opposition." He was reproved for the supposed extravagance of the sentiment, and he did not justify it. Probably it might not have immediately occurred to him, that the experiment had been tried, and that the event was recorded in the most faithful of all histories, the Holy Bible; otherwise he might, as it seems to me, have supported his opinion by that unexceptionable authority.

The Supreme Being had been pleased to nourish up a single family, by continued acts of his attentive providence, till it became a great people: and having rescued them from bondage by many miracles, performed by his servant Moses, he personally delivered to that chosen servant, in presence of the whole nation, a constitution and code of laws for their observance, accompanied and sanctioned with promises of great rewards, and threats of severe punishments, as the consequence of their obedience or disobedience.

This constitution, though the Deity himself was to be at its head (and it is therefore called by political writers a theocracy) could not be carried into execution but by the means of his ministers; Aaron and his sons were therefore commissioned to be, with Moses, the first established ministry of the new government.

One would have thought, that the appointment of men, who had distinguished themselves in procuring the liberty of their nation, and had hazarded their lives in openly opposing the will of a powerful monarch, who would have retained that nation in slavery, might have been an appointment acceptable to a grateful people; and that a constitution, framed for them by the Deity himself, might on that account have been secure of an universal welcome reception. Yet there were, in every one of the thirteen tribes, some discontented, restless spirits, who were continually exciting them to reject the proposed new government, and this from various motives.

Many still retained an affection for Egypt, the land of their nativity, and these, whenever they felt any inconvenience or hardship, though the natural and unavoidable effect of their change of situation, exclaimed against their leaders as the authors of their trouble: and were not only for returning into Egypt, but stoning their deliverers.* Those inclined to idolatry were displeased that their golden calf was destroyed. Many of the chiefs thought the new constitution might be injurious to their particular interests, that the profitable places would be *engrossed by the families and friends of Moses and Aaron*, and others, equally well born, excluded.†—In Josephus, and the Talmud, we learn some particulars, not so fully narrated in the Scripture. We are there told, "that Corah was ambitious of the priesthood, and offended that it was conferred on Aaron; and this, as he said, by the authority of Moses only, *without the consent of the people*. He accused Moses of having, by various artifices, fraudulently obtained the government, and deprived the people of their liberties, and of conspiring with Aaron to perpetuate the tyranny in their family. Thus, though Korah's real motive was the supplanting of Aaron, he persuaded the people, that he meant only the public good; and they, moved by his insinuations, began to cry out, "Let us maintain the common liberty of our *respective tribes*, we have freed ourselves from all the slavery imposed upon us by the Egyptians, and shall we suffer ourselves to be made slaves by Moses? If we must have a master, it were better to return to Pharaoh, who at least fed us with bread and onions, than to serve this new tyrant, who, by his operations, has brought us into danger of famine." Then they called in question the *reality of his conference* with God, and objected to the privacy of the meetings, and the preventing any of the people from being present at the coloquies, or even approaching the place, as grounds of great suspicion. They accused Moses also of *peculation*, as embezzling part of the golden spoons and the silver chargers, that the princes had offered at the dedication of the altar,‡ and the offerings of gold by the common people,§ as well as most of the poll tax;‖ and Aaron they accused of pocketing much of the gold of which he pretended to have made a molten calf. Besides peculation, they charged Moses with *ambition*; to gratify which passion, he had, they said, deceived the people, by promising to bring them to a land flowing with milk and honey; instead of doing which, he had brought them *from* such a land; and that he thought

* Numbers, chap. xiv.

† Numbers, chap. xvi. ver. 3. "And they gathered themselves together against Moses and against Aaron, and said unto them, ye take too much upon you, seeing all the congregations are holy, every one of them,—wherefore then lift ye up yourselves above the congregation."

‡ Numbers, chap. vii.

§ Exodus, chap. xxxv. ver. 22.

‖ Numbers, chap. iii; and Exodus, chap. xxx.

light of all this mischief, provided he could make himself an *absolute prince.** That, to support the new dignity with splendour in his family, the partial poll tax, already levied and given to Aaron,† was to be followed by a general one,‡ which would probably be augmented from time to time, if he were suffered to go on promulgating new laws, on pretence of new occasional revelations of the divine will, till their whole fortunes were devoured by that aristocracy.

Moses denied the charge of peculation, and his accusers were destitute of proofs to support it; though *facts*, if real, are in their nature capable of proof. "I have not," said he (with holy confidence in the presence of God,) "I have not taken from this people the value of an ass, nor done them any other injury." But his enemies had made the charge, and with some success among the populace; for no kind of accusation is so readily made, or easily believed, by knaves, as the accusation of knavery.

In fine, no less than two hundred and fifty of the principal men "famous in the congregation, men of renown,"§ heading and exciting the mob, worked them up to such a pitch of phrenzy, that they called out, stone him, stone him, and thereby secure our liberties; and let us choose other captains, that may lead us back into Egypt, in case we do not succeed in reducing the Canaanites.

On the whole, it appears, that the Israelites were a people jealous of their newly acquired liberty, which jealousy was in itself no fault; but that, when they suffered it to be worked upon by artful men, pretending public good, with nothing really in view but private interest, they were led to oppose the establishment of the new constitution, whereby they brought upon themselves much inconvenience and misfortune. It farther appears, from the same inestimable history, that when, after many ages, the constitution had become old and much abused, and an amendment of it was proposed, the populace, as they had accused Moses of the ambition of making himself a prince, and cried out, stone him, stone him; so, exciting by their high-priests and scribes, they exclaimed against the Messiah, that he aimed at becoming king of the Jews, and cried, crucify him, crucify him. From all which we may gather, that popular opposition to a public measure is no proof of its impropriety, even though the opposition be excited and headed by men of distinction.

To conclude, I beg I may not be understood to infer, that our general convention was divinely inspired, when it formed the new federal constitution, merely because that constitution has been unreasonably and vehemently opposed; yet, I must own, I have so much faith in the general government of the world by Providence, that I can hardly conceive a transaction of such momentous importance to the welfare of millions now existing, and to exist in the posterity of a great nation, should be suffered to pass without being in some degree influenced, guided, and governed by that omnipotent, omnipresent, and beneficent ruler, in whom all inferior spirits live, and move, and have their being.

* Numbers, chap. xvi. ver. 13. "Is it a small thing that thou hast brought us up out of a land flowing with milk and honey, to kill us in this wilderness, except thou make thyself altogether a prince over us."

† Numbers, chap. iii.

‡ Exodus, chap. xxx.

§ Numbers, chap. xvi.

THE INTERNAL STATE OF AMERICA;

Being a true description of the Interest and Policy of that vast Continent.

THERE is a tradition, that, in the planting of New England, the first settlers met with many difficulties and hardships; as is generally the case when a civilized people attempt establishing themselves in a wilderness country. Being piously disposed, they sought relief from Heaven, by laying their wants and distresses before the Lord, in frequent set days of fasting and prayer. Constant meditation and discourse on these subjects kept their minds gloomy and discontented; and, like the children of Israel, there were many disposed to return to that Egypt, which persecution had induced them to abandon. At length, when it was proposed in the assembly to proclaim another fast, a farmer of plain sense rose and remarked, that the inconveniences they suffered, and concerning which they had so often wearied Heaven with their complaints, were not so great as they might have expected, and were diminishing every day as the colony strengthened; that the earth began to reward their labour, and to furnish liberally for their subsistence; that the seas and rivers were found full of fish, the air sweet, the climate healthy; and, above all, that they were there in the full enjoyment of liberty, civil and religious: he therefore thought, that reflecting and conversing on these subjects would be more comfortable, as tending more to make them contented with their situation; and that it would be more becoming the gratitude they owed to the Divine Being, if, instead of a fast, they should proclaim a thanksgiving. His advice was taken; and from that day to this they have, in every year, observed circumstances of public felicity sufficient to furnish employment for a thanksgiving day; which is therefore constantly ordered and religiously observed.

I see in the public newspapers of different states frequent complaints of *hard times, deadness of trade, scarcity of money, &c.* It is not my intention to assert or maintain, that these complaints are entirely without foundation. There can be no country or nation existing, in which there will not be some people so circumstanced, as to find it hard to gain a livelihood; people who are not in the way of any profitable trade, and with whom money is scarce, because they have nothing to give in exchange for it; and it is always in the power of a small number to make a great clamour. But let us take a cool view of the general state of our affairs, and perhaps the prospect will appear less gloomy than has been imagined.

The great business of the continent is agriculture. For one artisan or merchant, I suppose, we have at least one hundred farmers, by far the greatest part cultivators of their own fertile lands, from whence many of them draw not only the food necessary for their subsistence, but the materials of their clothing, so as to need very few foreign supplies; while they have a surplus of productions to dispose of, whereby wealth is gradually accumulated. Such has been the goodness of Divine Providence to these regions, and so favourable the climate, that, since the three or four years of hardship in the first settlement of our fathers here, a famine or scarcity has never been heard of amongst us; on the contrary, though some years may have been more, and others less plentiful, there has always been provision enough for ourselves, and a quantity to spare for exportation. And although the crops of last year were generally good, never was the farmer better paid for the part he can spare commerce, as the published price currents abundantly testify. The lands he possesses are also continually rising in value with the increase of population; and, on the whole, he is enabled to give such good wages to those who work for him, that all who are acquainted with the old world must agree, that in no part of it are the labouring poor so generally well fed, well clothed, well lodged, and well paid, as in the United States of America.

If we enter the cities, we find, that, since the revolution, the owners of houses and lots of ground have had their interest vastly augmented in value; rents have risen to an astonishing height, and thence encouragement to increase building, which gives employment to an abundance of workmen, as does also the increased luxury and splendour of living of the inhabitants, thus made richer. These workmen all demand and obtain much higher wages than any other part of the world would afford them, and are paid in ready money.—This class of people therefore do not, or ought not, to complain of hard times; and they make a very considerable part of the city inhabitants.

At the distance I live from our American fisheries, I cannot speak of them with any degree of certainty; but I have not heard, that the labour of the valuable race of men employed in them is worse paid, or that they meet with less success, than before the revolution. The whale-men indeed have been deprived of one market for their oil; but another, I hear, is opening for them, which it is hoped may be equally advantageous; and the demand is constantly increasing for their spermaceti candels, which therefore bear a much higher price than formerly.

There remain the merchants and shopkeepers. Of these, though they make but a small part of the whole nation, the number is considerable, too great indeed for the business they are employed in; for the consumption of goods in every country has its limits; the faculties of the people, that is, their ability to buy and pay, being equal only to a certain quantity of merchandise. If merchants calculate amiss on this proportion, and import too much, they will of course find the sale dull for the overplus, and some of them will say, that trade languishes. They should, and doubtless will grow, wiser by experience, and import less. If too many artificers in town, and farmers from the country, flattering themselves with the idea of leading easier lives, turn shopkeepers, the whole natural quantity of that business divided among them all may afford too small a share for each, and occasion complaints, that trade is dead; these may also suppose, that it is owing to scarcity of money, while, in fact, it is not so much from the fewness of buyers, as from the excessive number of sellers, that the mischief arises; and, if every shopkeeping farmer and mechanic would return to the use of his plough and working tools, there would remain of widows, and other women, shopkeepers sufficient for the business, which might then afford them a comfortable maintenance.

Whoever has travelled through the various parts of Europe, and observed how small is the proportion of people in affluence or easy circumstances there, compared with those in poverty and misery; the few rich and haughty landlords, the multitude of poor, abject, rack-rented, tythe-paying tenants, and half paid and half-starved ragged labourers; and views here the happy mediocrity, that so generally prevails throughout these states, where the cultivator works for himself, and supports his family in decent plenty, will, methinks, see abundant reason to bless Divine Providence for the evident and great difference in our favour, and be convinced, that no nation known to us enjoys a greater share of human felicity.

It is true, that in some of the states there

are parties and discords; but let us look back, and ask if we were ever without them? Such will exist wherever there is liberty; and perhaps they help to preserve it. By the collision of different sentiments, sparks of truth are struck out, and political light is obtained. The different factions, which at present divide us, aim all at the public good: the differences are only about the various modes of promoting it. Things, actions, measures, and objects of all kinds, present themselves to the minds of men in such a variety of lights, that it is not possible we should all think alike at the same time on every subject, when hardly the same man retains at all times the same ideas of it. Parties are therefore the common lot of humanity; and ours are by no means more mischievous or less beneficial than those of other countries, nations, and ages, enjoying in the same degree the great blessing of political liberty.

Some indeed among us are not so much grieved for the present state of our affairs, as apprehensive for the future. The growth of luxury alarms them, and they think we are from that alone in the high road to ruin. They observe, that no revenue is sufficient without economy, and that the most plentiful income of a whole people from the natural productions of their country may be dissipated in vain and needless expenses, and poverty be introduced in the place of affluence. This may be possible. It however rarely happens: for there seems to be in every nation a greater proportion of industry and frugality, which tend to enrich, than of idleness and prodigality, which occasion poverty; so that upon the whole there is a continual accumulation. Reflect what Spain, Gaul, Germany, and Britain were in the time of the Romans, inhabited by people little richer than our savages, and consider the wealth they at present possess, in numerous well-built cities, improved farms, rich moveables, magazines stocked with valuable manufactures, to say nothing of plate, jewels, and coined money; and all this, notwithstanding their bad, wasteful, plundering governments, and their mad destructive wars; and yet luxury and extravagant living has never suffered much restraint in those countries. Then consider the great proportion of industrious frugal farmers inhabiting the interior parts of these American states, and of whom the body of our nation consists, and judge whether it is possible, that the luxury of our sea-ports can be sufficient to ruin such a country.—If the importation of foreign luxuries could ruin a people, we should probably have been ruined long ago; for the British nation claimed a right, and practised it, of importing among us not only the superfluities of their own production, but those of every nation under heaven; we bought and consumed them, and yet we flourished and grew rich. At present our independent governments may do what we could not then do, discourage by heavy duties, or prevent by heavy prohibitions, such importations, and thereby grow richer; if, indeed, which may admit of dispute, the desire of adorning ourselves with fine clothes, possessing fine furniture, with elegant houses, &c. is not, by strongly inciting to labour and industry, the occasion of producing a greater value, than is consumed in the gratification of that desire.

The agriculture and fisheries of the United States are the great sources of our increasing wealth. He that puts a seed into the earth is recompensed, perhaps, by receiving forty out of it; and he who draws a fish out of our water, draws up a piece of silver.

Let us (and there is no doubt but we shall) be attentive to these, and then the power of rivals, with all their restraining and prohibiting acts, cannot much hurt us. We are sons of the earth and seas, and, like Antæus in the fable, if, in wrestling with a Hercules, we now and then receive a fall, the touch of our parents will communicate to us fresh strength and vigour to renew the contest.

SETTLEMENT ON OHIO.

When lord Halifax presided over the British Board of Trade, 1760, a plan was suggested by Dr. Franklin for establishing a colony or settlement on the river Ohio; considerations of policy and utility were combined in this design; among others that of serving as a protection to the interior frontier of the adjoining colonies against the Indians, which was highly approved by the Board of Trade. It had not been proceeded in at that period, but in 1770 it was renewed, and Thomas Walpole, an eminent banker of London, was associated with Dr Franklin, John Sargent, and Samuel Wharton, and many others of great property in the design. A petition praying for a tract of land on the Ohio for this purpose was presented to the king in council by the above-named persons, on behalf of themselves and others. After the petition had been for some time before the privy council, it was referred, as usual, to the Board of Trade, to consider and report. The report made appears to have been drawn up by lord Hillsborough, who then presided at that Board. The answer which follows was written by Dr. Franklin. Those papers excited great attention at that period, and it is believed lord Hillsborough never forgave Dr. Franklin the humiliation he felt from this answer.

Report of the Lord Commissioners for Trade and Plantations, on the Petition of the Honourable Thomas Walpole and his Associates, for a Grant of Lands on the river Ohio, in North America.

My Lords,—Pursuant to your lordships order of the 25th May, 1770, we have taken into our consideration the humble memorial of the honourable Thomas Walpole, Benjamin Franklin, John Sargent, and Samuel Wharton, esquires, in behalf of themselves and their associates, setting forth among other things, "That they presented a petition to his majesty in council, for a grant of lands in America (*parcel* of the lands purchased by government of the Indians) in consideration of a

price to be paid in purchase of the same; *that in pursuance of a suggestion which arose when the said petition was under consideration of the lords commissioners for trade and plantations*, the memorialists presented a petition to the lords commissioners of the treasury, proposing to purchase a larger tract of land on the river Ohio in America, sufficient for a separate government; whereupon their lordships were pleased to acquaint the memorialists, they had no objection to accepting the proposals made by them, with respect to the purchase-money and quit-rent to be paid for the said tract of land, if it should be thought adviseable by those departments of government, to whom it belonged to judge of the proprietary of the grant, both in point of policy and justice, that the grant should be made; in consequence whereof the memorialists humbly renew their application, that a grant of said lands may be made to them, *reserving therein to all persons their just and legal rights to any parts or parcels of said lands which may be comprehended within the tract prayed for by the memorialists*;" whereupon we beg leave to *report* to your lordships,

I. That according to the description of the tract of land prayed for by the memorialists, which description is annexed to their memorial, it appears to us to contain part of the dominion of Virginia, to the south of the river Ohio, and to extend several degrees of longitude westward from the western ridge of the Appalachian mountains, as will more fully appear to your lordships from the annexed sketch of the said tract, which we have since caused to be delineated with as much exactness as possible, and herewith submit to your lordships, to the end that your lordships may judge, with the greater precision, of the situation of the lands prayed for in the memorial.

II. From this sketch your lordships will observe, that a very considerable part of the lands prayed for lies beyond the line, which has, in consequence of his majesty's orders for that purpose, been settled by treaty, as well with the tribes of the Six Nations and their confederates, as with the Cherokee Indians, as the boundary line between his majesty's territories and their hunting grounds; and as the faith of the crown is pledged in the most solemn manner both to the Six Nations and to the Cherokees, that notwithstanding the former of these nations had ceded the property in the lands to his majesty, yet no settlement shall be made beyond that line, it is our duty to report to your lordships our opinion, that it would on that account be highly improper to comply with the request of the memorial, *so far as it includes any lands beyond the said line.*

It remains therefore, that we report to your lordships our opinion, how far it may consist with good policy and justice that his majesty should comply with that part of the memorial which relates to those lands, which are situated to the east of that line, and are part of the dominion of Virginia.

III. And first with regard to the policy, we take leave to remind your lordships of that principle which was adopted by this board, and approved and confirmed by his majesty, immediately after the treaty of Paris, viz. the confining the western extent of settlements, to such a distance from the sea-coast, as that those settlements should lie *within the reach of the trade and commerce of this kingdom*, upon which the strength and riches of it depend, and also of the exercise of that authority and jurisdiction, which was conceived to be necessary for the preservation of the colonies, in a due subordination to, and dependence upon, the mother-country; and these we apprehend to have been two capital objects of his majesty's proclamation of the 7th of October, 1763, by which his majesty declares it to be his royal will and pleasure, to reserve under his sovereignty, protection, and dominion, for the *use* of the Indians, all the lands not included within the three new governments, the limits of which are described therein, as also all the lands and territories lying to the westward of the sources of the rivers which fall into the sea from the west and north-west, and by which, all persons are forbid to make any purchases or settlements whatever, or to take possession of any of the lands above reserved, without special license for that purpose.

IV. It is true indeed, that partly from *want of precision* in describing the line intended to be marked out by the proclamation of 1763, and partly from a consideration of justice *in regard to legal titles to lands*, which had been settled beyond that line, it has been since thought fit to enter into engagements with the Indians, for fixing a more precise and determined *boundary* between his majesty's territories and their hunting grounds.

V. By this *boundary*, so far as regards the case now in question, your lordships will observe, that the hunting grounds of the Indians are reduced within narrower limits than were specified by the proclamation of 1763; we beg leave, however, to submit to your lordships, that the same principles of policy, in reference to settlements *at so great a distance* from the seacoast *as to be out of the reach of all advantageous intercourse with this kingdom*, continue to exist in their full force and spirit, and though various propositions for erecting new colonies in the interior parts of America have been, in consequence of this extension of the boundary line, submitted to the consideration of government (particularly in that part of the country wherein are situated the lands now prayed for, with a view

to that object) yet the dangers and disadvantages of complying with such proposals have been so obvious, as to defeat every attempt made for carrying them into execution.

"VI. Many objections, besides those which we have already stated, occur to us to propositions of this kind; but as *every argument* on this subject is *collected together with great force and precision*, in a representation made to his majesty by the commissioners for trade and plantations in March, 1768, we beg leave to state them to your lordships in their words.

In that representation they deliver their opinion upon a proposition for settling new colonies in the interior country as follows, viz.

"The proposition of forming inland colonies in America, is, we humbly conceive, entirely new: it adopts principles in respect to American settlements different from what has hitherto been the policy of this kingdom, and leads to a system which if pursued through all its consequences, is, in the present state of that country, of the greatest importance.

"The great object of colonizing upon the continent of North America, has been to improve and extend the commerce, navigation, and manufactures of this kingdom, upon which its strength and security depend.

"1. By promoting the advantageous fishery carried on upon the northern coast.

"2. By encouraging the growth and culture of naval stores, and of raw materials, to be transported hither in exchange for perfect manufactures and other merchandise.

"3. By securing a supply of lumber, provisions, and other necessaries, for the support of our establishments in the American islands.

"In order to answer these salutary purposes it has been the policy of this kingdom to confine her settlements as much as possible to the sea-coast, and not to extend them to places inaccessible to shipping, and consequently more out of the reach of commerce; a plan, which, at the same time that it secured the attainment of these commercial objects, had the further political advantage of guarding against all interfering of foreign powers, and of enabling this kingdom to keep up a superior naval force in those seas, by the actual possession of such rivers and harbours as were proper stations for fleets in time of war.

"Such, may it please your majesty, have been the considerations inducing that plan of policy hitherto pursued in the settlement of your majesty's American colonies, with which the private interest and sagacity of the settlers co-operated from the first establishments formed upon that continent; it was upon these principles, and with these views, that government undertook the settling of Nova Scotia in 1749; and it was from a view of the advantages represented to arise from it in these different articles, that it was so liberally supported by the aid of parliament.

"The same motives, though operating in a less degree, and applying to fewer objects, did, as we humbly conceive, induce the forming the colonies of Georgia, East Florida, and West Florida, to the south, and the making those provincial arrangements in the proclamation of 1763, by which the interior country was left to the possession of the Indians.

"Having thus briefly stated what has been the policy of this kingdom in respect to colonizing in America, it may be necessary to take a cursory view of what has been the effect of it in those colonies, where there has been sufficient time for that effect to discover itself; because, if it shall appear from the present state of these settlements, and the progress they have made, that they are likely to produce the advantages above stated, it will, we humbly apprehend, be a very strong argument against forming settlements in the interior country; more especially, when every advantage, derived from an established government, would naturally tend to draw the stream of population; fertility of soil and temperature of climate offering superior incitements to settlers, who, exposed to few hardships, and struggling with few difficulties, could, with little labour, earn an abundance for their own wants, but without a possibility of supplying ours with any considerable quantities. Nor would these inducements be confined in their operation to foreign emigrants, determining their choice where to settle, but would act most powerfully upon the inhabitants of the northern and southern latitudes of your majesty's American dominions; who, ever suffering under the opposite extremes of heat and cold, would be equally tempted by a moderate climate to abandon latitudes peculiarly adapted to the production of those things, which are by nature denied to us; and for the whole of which we should, without their assistance, stand indebted to, and dependant upon other countries.

"It is well known, that antecedent to the year 1749, all that part of the sea-coast of the British empire in America, which extends north-east from the province of Main to Canceau in Nova Scotia, and from thence north to the mouth of St. Laurence river, lay waste and neglected; though naturally affording, or capable by art of producing, every species of naval stores; the seas bounding with whale, cod, and other valuable fish, and having many great rivers, bays, and harbours, fit for the reception of ships of war. Thus circumstanced, a consideration of the great commercial advantages which would follow from securing the possession of this country, combined with the evidence of the value set upon it by our enemies, who, during the war which terminated

at that period, had, at an immense expense, attempted to wrest it from us, induced that plan, for the settlement of Nova Scotia, to which we have before referred; and which, being prosecuted with vigour, though at a very large expense to this kingdom, secured the possession of that province, and formed those establishments which contributed so greatly to facilitate and promote the success of your majesty's arms in the late war.

"The establishment of government in this part of America, having opened to the view and information of your majesty's subjects in other colonies the great commercial advantages to be derived from it, induced a zeal for migration; and associations were formed for taking up lands, and making settlements, in this province, by principal persons residing in these colonies.

"In consequence of these associations, upwards of ten thousand souls have passed from those colonies into Nova Scotia; who have either engaged in the fisheries, or become exporters of lumber and provisions to the West Indies. And further settlements, to the extent of twenty-one townships, of one hundred thousand acres each, have been engaged to be made there, by many of the principal persons in Pennsylvania, whose names and association for that purpose now lie before your majesty in council.

"The government of Massachusetts Bay, as well as the proprietors of large tracts to the eastward of the province of Maine, excited by the success of these settlements, are giving every encouragement to the like settlements in that valuable country, lying between them and Nova Scotia; and the proprietors of the twelve townships lately laid out there, by the Massachusetts government, now solicit your majesty for a confirmation of their title.

"Such, may it please your majesty, is the present state of the progress making in the settlement of the northern parts of the sea-coasts of North America, in consequence of what appears to have been the policy adopted by this kingdom: and many persons of rank and substance here are proceeding to carry into execution the plan which your majesty (pursuing the same principles of commercial policy) has approved, for the settlement of the islands of St. John and Cape Breton, and of the new-established colonies to the south: and, therefore, as we are fully convinced, that the encouraging settlements upon the sea-coast of North America is founded in the true principles of commercial policy; and as we find, upon examination, that the happy effects of that policy are now beginning to open themselves, in the establishment of these branches of commerce, culture, and navigation, upon which the strength, wealth, and security of this kingdom depend; we cannot be of opinion, that it would in any view be adviseable, to divest your majesty's subjects in America, from the pursuit of those important objects, by adopting measures of a new policy, *at an expense to this kingdom, which in its present state it is unable to bear.*

"This, may it please your majesty, being the light in which we view the proposition of colonizing in the interior country, considered as a general principle of policy, we shall in the next place, proceed to examine the several arguments urged in support of the particular establishments now recommended.

"These arguments appear to us reducible to the following general propositions, viz.

"First, That such colonies will promote population, and increase the demands for and consumption of British manufactures.

"Secondly, That they will secure the fur trade, and prevent an illicit trade, or interfering of French or Spaniards with the Indians.

"Thirdly, That they will be a defence and protection to the old colonies against the Indians.

"Fourthly, That they will contribute to lessen the present heavy expense of supplying provisions to the distant forts and garrisons.

"Lastly, That they are necessary in respect to the inhabitants already residing in those places where they are proposed to be established, who require some form of civil government.

"After what we have already stated with respect to the policy of encouraging colonies in the interior country as a general principle, we trust it will not be necessary to enter into an ample discussion of the arguments brought to support the foregoing propositions.

"We admit as an undeniable principle of true policy, that with a view to prevent manufactures, it is necessary and proper to open an extent of territory for colonization proportioned to the increase of people, as a large number of inhabitants cooped up in narrow limits, without a sufficiency of land for produce, would be compelled to convert their attention and industry to manufactures; but we submit whether the encouragement given to the settlement of the colonies upon the sea-coast, and the effect which such encouragement has had, have not already effectually provided for this object, as well as for increasing the demand for, and consumption of British manufactures, an advantage which, in our humble opinion, would not be promoted by these new colonies, which being proposed to be established at the distance of *above fifteen hundred miles from the sea*, and in places which, upon the fullest evidence, are found to be utterly inaccessible to shipping, will, from their inability to find returns wherewith to pay for the manufactures of Great Britain, be probably led to manufacture for themselves; a consequence which experience shows has constantly attended in

a greater or lesser degree every inland settlement, and therefore ought, in our humble opinion, to be carefully guarded against, by *encouraging* the settlement of that extensive tract of sea-coast, hitherto unoccupied; *which, together with the liberty that the inhabitants of the middle colonies will have* (in consequence *of the proposed boundary line with the Indians*) of *gradually extending themselves backwards*, will more effectually and beneficially answer the object of encouraging population and consumption, than the erection of new governments; such gradual extension might, through the medium of a continued population, upon even the same extent of territory, preserve a communication of mutual commercial benefits between its extremest parts and Great Britain, *impossible to exist in colonies separated by immense tracts of unpeopled desert.*—As to the effect which it is supposed the colonies may have to increase and promote the fur trade, and to prevent all contraband trade or intercourse between the Indians under your majesty's protection, and the French or Spaniards; it does appear to us, that the extension of the fur trade depends entirely upon the Indians being undisturbed in the possession of their hunting grounds; that all colonizing does in its nature, and must in its consequences, operate to the prejudice of that branch of commerce, and that the French and Spaniards would be left in possession of a great part of what remained; as New Orleans would still continue the best and surest market.

"As to the protection which it is supposed these new colonies may be capable of affording to the old ones, it will, in our opinion, appear upon the slightest view of their situation, that so far from affording protection to the old colonies, they will stand most in need of it themselves.

"It cannot be denied, that new colonies would be of advantage in raising provisions for the supply of such forts and garrisons as may be kept up in the neighbourhood of them; but as the degree of utility will be proportioned to the number and situation of these forts and garrisons, which upon the result of the present inquiry it may be thought adviseable to continue, so the force of the argument will depend upon that event.

"The present French inhabitants in the neighbourhood of the lakes will, in our humble opinion, be sufficient to furnish with provisions whatever posts may be necessary to be continued there; and as there are also French inhabitants settled in some parts of the country lying upon the Mississippi, between the rivers Illinois and the Ohio, it is to be hoped that a sufficient number of these may be induced to fix their abode, where the same convenience and advantage may be derived from them; but if no such circumstance were to exist, and no such assistance to be expected from it, the objections stated to the plan now under our consideration are superior to this, or any other advantage it can produce; and although civil establishments have frequently rendered the expense of an armed force necessary for their protection, one of the many objections to these now proposed, yet we humbly presume there never has been an instance of a government instituted merely with a view to supply a body of troops with suitable provisions; nor is it necessary in these instances for these settlements, already existing as above described, which being formed under military establishments, and ever subjected to military authority, do not, in our humble opinion, require any other superintendence than that of the military officers commanding at these posts."

"In addition to this opinion of the board of trade, expressed in the foregoing recital, we further beg leave to refer your lordships to the opinion of the commander-in-chief of his majesty's forces in North America, who, in a letter laid before us by the earl of Hillsborough, delivers his sentiments with regard to settlements in the interior parts of America in the following words, viz.

"VII. As to increasing the settlements to respectable provinces, and to colonization in *general terms* in the *remote* countries, I conceive it altogether inconsistent with sound policy; for there is little appearance that the advantages will arise from it, which nations expect when they send out colonies into *foreign countries;* they can give no encouragement to the fishery, and though the country might afford some kind of naval stores, the distance would be too far to transport them; and for the same reason they could not supply the sugar islands with lumber and provisions. As for the raising wine, silk, and other commodities, the same may be said of the present colonies without planting others for the purpose at so vast a distance; but on the supposition that they would be raised, their very long transportation must probably make them too dear for any market. I do not apprehend the inhabitants could have any commodities to barter for manufactures, except skins and furs, which will naturally decrease, as the country increases in people, and the deserts are cultivated; so that in the course of a few years necessity would force them to provide manufactures of some kind for themselves; and when all connexion upheld by commerce with the mother-country shall cease, it may be expected, that an independency on her government will soon follow; the pretence of forming barriers will have no end; wherever we settle, however remote, there must be a frontier; and there is room enough for the colonists to spread within our present limits, for a century to come. If we reflect how

the people of themselves have gradually retired from the coast, we shall be convinced they want no encouragement to desert the sea-coast, and go into the back countries, where the lands are better, and got upon easier terms; they are already almost out of the reach of the law and government; neither the endeavours of government, or fear of Indians, has kept them properly within bounds; and it is apparently most for the interest of Great Britain to confine the colonies on the side of the back country, and to direct their settlements along the sea-coast, where millions of acres are yet uncultivated. The lower provinces are still thinly inhabited, and brought to the point of perfection that has been aimed at for the mutual benefit of Great Britain and themselves. Although America may supply the mother-country with many articles, few of them are yet supplied in quantities equal to her consumption, the quantity of iron transported is not great, of hemp very small, and there are many other commodities not necessary to enumerate, which America has not yet been able to raise, notwithstanding the encouragement given her by bounties and premiums. The laying open new tracts of fertile territory in moderate climates might lessen her present produce; for it is the passion of every man to be a landholder, and the people have a natural disposition to rove in search of good lands, however distant. It may be a question likewise, whether colonization of the kind could be effected *without an Indian war and fighting for every inch of ground.* The Indians have long been jealous of our power, and have no patience in seeing us approach their towns, and settle upon their hunting grounds; atonements may be made for a fraud discovered in a trader, and even the murder of some of their tribes, but *encroachments* upon their lands have often produced serious consequences. The springs of the last general war are to be discovered near the Alleghany mountains, and upon the banks of the Ohio.

"It is so obvious, that settlers might raise provisions to feed the troops, cheaper than it can be transported from the country below, that it is not necessary to explain it; but I must own I know no other use in settlements, or can give any other reason for supporting forts, than to protect the settlements, and keep the settlers in subjection to government.

"I conceive, that to procure all the commerce it will afford, and at as little expense to ourselves as we can, is the only object we should have in view in the interior country, for a century to come; and I imagine it might be effected, by proper management, without either forts or settlements. Our manufactures are as much desired by the Indians, as their peltry is sought for by us; what was originally deemed a superfluity, or a luxury by the natives, is now become a necessary; they are disused to the bow, and can neither hunt or make war without fire-arms, powder, and lead. The British provinces can only supply them with their necessaries, which they know, and for their own sakes would protect the trader, which they actually do at present. It would remain with us to prevent the traders being guilty of frauds and impositions, and to pursue the same methods to that end, as are taken in the southern district, and I must confess, though the plan pursued in that district might be improved by proper laws to support it, that I do not know a better, or more economical plan for the management of trade; there are neither forts nor settlements, in the southern department, and there are both in the northern department; and your lordships will be the best judge, which of them has given you the least trouble; in which we have had the fewest quarrels with, or complaints from the Indians.

"I know of nothing so liable to bring on a serious quarrel with Indians *as an invasion of their property.* Let the savages enjoy their deserts in quiet; little bickerings that may unavoidably sometimes happen, may soon be accommodated; and I am of opinion, independent of the motives of common justice and humanity, that the principles of interest and policy, should induce us rather to protect than molest them: were they driven from their forests, the peltry trade would decrease; and it is *not impossible* that worse savages would take refuge in them, for they might then become the asylum of fugitive negroes, and idle vagabonds, escaped from justice, who in time might become formidable, and subsist by rapine, and plundering the lower countries."

VIII. The opinions delivered in the foregoing recitals are so accurate and precise, as to make it almost unnecessary to add any thing more: but we beg leave to lay before your lordships the sentiments of his majesty's governor of Georgia, upon the subject of large grants in the interior parts of America, whose knowledge and experience in the affairs of the colonies give great weight to his opinion.

In a letter to us, on the subject of the mischiefs attending such grants, he expresses himself in the following manner, viz.

"And now, my lords, I beg your patience a moment, while I consider this matter in a more extensive point of view, and go a little further in declaring my sentiments and opinion, with respect to the granting of large bodies of land in the back parts of the province of Georgia, or in any other of his majesty's northern colonies, at a distance from the sea-coast, or from such parts of any province as is already settled and inhabited.

"And this matter, my lords, appears to me in a very serious and alarming light; and I

humbly conceive may be attended with the greatest and worst of consequences; for, my lords, if a vast territory be granted to any set of gentlemen, who really mean to people it, and actually do so, it must draw and carry out a great number of people from Great Britain; and I apprehend they will soon become a kind of separate and independent people, and who will set up for themselves; that they will soon have manufactures of their own; that they will neither take supplies from the mother-country, or from the provinces, at the back of which they are settled; that being at a distance from the seat of government, courts, magistrates, &c. &c., they will be out of the reach and control and law of government; that it will become a receptacle and kind of asylum for offenders, who will fly from justice to such new country or colony; and therefore crimes and offences will be committed, not only by the inhabitants of such new settlements, but elsewhere, and pass with impunity; and that in process of time (and perhaps at no great distance) they will become formidable enough to oppose his majesty's authority, disturb government, and even give law to the other or first settled part of the country, and throw every thing into confusion.

"My lords, I hope I shall not be thought impertinent, when I give my opinion freely, in a matter of so great consequence, as I conceive this to be; and, my lords, I apprehend, that in all the American colonies, great care should be taken, that the lands on the sea-coast should be thick settled with inhabitants, and well cultivated and improved; and that the settlements should be gradually extended back into the province, and as much connected as possible, to keep the people together in as narrow a compass, *as the nature of the lands, and state of things will admit of*; and by which means there would probably become only one general view and interest amongst them and the power of government, and law would of course naturally and easily go with them, and matters thereby properly regulated, and kept in due order and obedience; and they would have no idea of resisting or transgressing either, without being amenable to justice, and subject to punishment for offences they may commit.

"But, my lords, to suffer a kind of *province within a province*, and one that may, indeed must, in process of time, become superior, and too big for the head, or original settlement or seat of government, to me conveys with it many ideas of consequences, of such a nature, as I apprehend are extremely dangerous and improper, and it would be the policy of government to avoid and prevent, whilst in their power to do so.

"My ideas, my lords, are not chimerical; I know something of the situation and state of things in America; and from some little occurrences or instances that have already really happened, I can very easily figure to myself what may, and, in short, what will certainly happen, if not prevented in time."

IX. At the same time that we submit the foregoing reasoning against colonization in the interior country to your lordship's consideration, it is proper we should take notice of one argument, which has been invariably held forth in support of every proposition of this nature, and upon which the present proponents appear to lay great stress. It is urged, that such is the state of the country now proposed to be granted, and erected into a separate government, that no endeavours on the part of the crown can avail, to prevent its being settled by those who, by the increase of population in the middle colonies, are continually emigrating to the westward, and forming themselves into colonies in that country, without the intervention or control of government; and who, if suffered to continue in that lawless state of anarchy and confusion, will commit such abuses as cannot fail of involving us in quarrel and dispute with the Indians, and thereby endangering the security of his majesty's colonies.

"We admit, that this is an argument that deserves attention; and we rather take notice of it in this place, because some of the objections stated by governor Wright *lose their force, upon the supposition that the grants against which he argues are to be erected into separate governments.* But we are clearly of opinion, that his arguments do, in the general view of them, as applied to the question of granting lands in the interior parts of America, stand unanswerable; and admitting that the settlers in the country in question are *as numerous as report states them to be*, yet we submit to your lordships, that this is a fact which does, in the nature of it, operate strongly in point of argument *against* what is proposed; for, if the foregoing reasoning has any weight, it certainly ought to induce your lordships to advise his majesty to take every method to *check* the progress of these settlements, and *not* to make such grants of the land as will have an immediate tendency to encourage them; a measure which we conceive is altogether as unnecessary as it is impolitic, as we see nothing to hinder the government of Virginia from extending the laws and constitution of that colony to such persons as may have already settled there *under legal titles.*

X. And there is one objection suggested by governor Wright to the extension of settlements in the interior country, which, we submit, deserves your lordship's particular attention, viz. the encouragement that is thereby held out to the emigration of his ma-

jesty's European subjects; an argument which, in the present situation of this kingdom, demands very serious consideration, and has for some time past had so great weight with this board, that it has induced us to deny our concurrence to many proposals for grants of land, even in those parts of the continent of America where, in all other respects, we are of opinion, that it consists with the true policy of this kingdom to encourage settlements; and this consideration of the certain bad consequences which must result from a continuance of such emigrations as have lately taken place from various parts of his majesty's European dominions, added to the constant drains to Africa, to the East Indies, and to the new ceded islands, will, we trust, with what has been before stated, be a sufficient answer to every argument that can be urged in support of the present memorial, so far as regards the consideration of it in point of policy.

XI. With regard to the propriety in point of *justice*, of making the grant desired, we presume this consideration can have reference only to the case of such persons who have already possession of lands in that part of the country, under legal titles derived from grants made by the governor and council of Virginia; upon which case we have only to observe, that it does appear to us, that there are *some* such possessions held by persons who are not parties to the present memorial; and therefore, if your lordships shall be of opinion, that the making the grant desired would, notwithstanding the reservation proposed, in respect to such titles, have the effect to disturb those possessions, or to expose the proprietors to suit and litigation, we do conceive that, in that case, the grant would be objectionable in point of justice.

XII. Upon the whole, therefore, we cannot recommend to your lordships to advise his majesty to comply with the prayer of this memorial, either as to the erection of any parts of the lands into a separate government, or the making a grant of them to the memorialists; but, on the contrary, we are of opinion, that settlements in that distant part of the country should be as much discouraged as possible; and that, in order thereto, it will be expedient, not only that the orders which have been given to the governor of Virginia, not to make any further grants beyond the line prescribed by the proclamation of 1763, should be continued and enforced, but that another proclamation should be issued, declaratory of his majesty's resolution not to allow for the *present*, any new settlements beyond that line, and to forbid all persons from taking up or settling any lands in that part of the country.—We are, my lords, your lordships most obedient and most humble servants.

Whitehall, April 15, 1772.

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Observations on, and answers to the foregoing report.

[Drawn up by Dr. Benjamin Franklin.]

I. The first paragraph of the report, we apprehend, was intended to establish two propositions as facts; viz.

First, That the tract of land agreed for with the lords commissioners of the treasury, contains part of the dominion of Virginia.

Second, That it extends several degrees of longitude *westward* from the western ridge of the *Alleghany* mountains.

On the first proposition we shall only remark, that no part of the above tract is to the *eastward* of the Alleghany mountains;—and that these mountains must be considered as the true western boundary of *Virginia;* for the king was *not* seised and possessed of a right *to the country westward* of the mountains, until his majesty purchased it, in the year 1768, from the Six Nations: and since that time, there has not been any annexation of such purchase, or of any part thereof, to the colony of Virginia.

On the second proposition,—we shall just observe, that the lords commissioners for trade and plantations appear to us to be as erroneous in this as in the former proposition; for their lordships say, that the tract of land under consideration *extends several degrees* of longitude *westward*. The truth is, that it is not more, on a medium, that one degree and a half of longitude from the western ridge of the Alleghany mountains to the river Ohio.

II. It appears by the second paragraph, as if the lords commissioners for trade and plantations apprehended,—that the lands southwesterly of the *boundary line*, marked on a map annexed to their lordships' report,—were either claimed by the Cherokees, or were their hunting grounds, or were the hunting grounds of the Six Nations and their confederates.

As to any claim of the Cherokees to the above country, it is altogether new and indefensible; and never was heard of, until the appointment of Mr. Stewart to the superintendency of the southern colonies, about the year 1764; and this, we flatter ourselves, will not only be obvious from the following state of facts, but that the right to *all the country* on the southerly side of the river Ohio, quite to the Cherokee river, is *now* undoubtedly vested in the king, by the grant which the Six Nations made to his majesty at Fort Stanwix, in November, 1768.—In short, the lands from the *Great Kenhawa* to the *Cherokee river* never were either the dwelling or hunting grounds of the *Cherokees*;—but formerly belonged to, and were inhabited by the *Shawanese*, until such time as they were conquered by the Six Nations.

Mr. Colden, the present lieutenant-govern-

or of New York, in his history of the Five Nations, observes, that about the year 1664, "the Five Nations being amply supplied by the English with fire-arms and ammunition, gave a full swing to their warlike genius. They carried their arms *as far south as Carolina*, to the northward of New England, and *as far west as the river Mississippi*, over a vast country, which extended twelve hundred miles in length from north to south, and about six hundred miles in breadth,—where they entirely destroyed whole nations, of whom there are no accounts remaining among the English."

In 1701, the Five Nations put all their hunting lands under the protection of the English, as appears by the records, and by the recital and confirmation thereof, in their deed to the king of the 4th September, 1726;—and governor Pownall, who many years ago diligently searched into the rights of the natives, and in particular into those of the northern confederacy, says, in his book intituled, the *Administration of the Colonies*, "The right of the Five Nation confederacy to the hunting *lands of Ohio*, Ticûcksouchrondite and Scaniaderiada, by the conquest they made, in subduing the *Shaõanoes*, Delawares (as we call them,) Twictwees, and Oilinois, may be fairly proved, as they stood possessed thereof at the peace of Ryswick, 1697."—And confirmatory hereof, Mr. Lewis Evans, a gentleman of great American knowledge, in his map of the middle colonies, published in America in the year 1755, has laid down the country on the south-easterly side of the river Ohio, *as the hunting lands of the Six Nations;* and in his analysis to this map, he expressly says,—"The *Shawanese*, who were formerly one of the most considerable nations of those parts of America, whose seat extended from *Kentucke* south-westward to the Mississippi, have been subdued by the confederates (or Six Nations) *and the country since became their property.* No nation," Mr. Evans adds, "held out with greater resolution and bravery, and although they have been scattered in all parts for a while, they are again collected on Ohio, under the dominion of the confederates."

At a congress held in the year 1744, by the provinces of Pennsylvania, Maryland, and Virginia, with the Six Nations,—the commissioners of Virginia, in a speech to the sachems and warriors of that confederacy, say, "tell us what nations of Indians you conquered any lands from in Virginia, how long it is since, and what possession you have had; and if it does appear that there is any land on the borders of Virginia that the Six Nations have a right to, we are willing to make you satisfaction."

To this speech, the Six Nations gave the following animated and decisive answer:—"All the world knows we conquered the several nations living on Susquehanna, Cohongoranto [*i. e.* Powtomack] *and on the back of the great mountains in Virginia;*—the Conoy-uck-suck-roona, Cocknow-was-roonan, Tohoa-irough-roonan, and Connutskinough-roonaw *feel* the effects of our conquests; being now a part of our nations, and their lands at *our* disposal. We know very well, it hath often been said by the Virginians, that the king of England and the people of that colony conquered the people who lived there; but it is not true. We will allow, they conquered the Sachdagughronaw, and drove back the Tuskaroras [the first resided near the branches of James's river in Virginia, and the latter on these branches] and that they have, on that account, a right to some parts of Virginia; *but as to what lies beyond the mountains, we conquered the nations residing there, and that land,* if the Virginians ever get a *good right to it, it must be by us.*"

In the year 1750, the French seized four English traders, who were trading with the Six Nations, Shawanese, and Delawares, on the waters of the Ohio, and sent them prisoners to Quebec, and from thence to France.

In 1754, the French took a formal possession of the river Ohio, and built forts at Venango,—at the confluence of the Ohio and Monongahela, and at the *mouth of the Cherokee river.*

In 1755, general Baddock was sent to America with an army, to remove the French from their possessions *over* the Alleghany mountains, and on the river Ohio; and on his arrival at Alexandria, he held a council of war with the governors of Virginia, Maryland, Pennsylvania, New York, and the Massachusetts Bay;—and as these gentlemen well knew, that the country claimed by the French, *over the Alleghany mountains, and south-westerly to the river Mississippi*, was the unquestionable property of the *Six Nations*, and *not* of the Cherokees, or any other tribe of Indians,—the general gave instructions to sir William Johnson to call together the Indians of the *Six Nations*, and lay before them their before-mentioned grant to the king in 1726,—wherein they had put all their hunting lands *under his majesty's protection; to be guaranteed to them, and to their use:*—And as general Braddock's instructions are clearly declaratory of the right of the Six Nations to the lands under consideration, we shall here transcribe the conclusive words of them,—And it appearing that the French have, from time to time, by fraud and violence, built strong forts *within the limits of the said lands*, contrary to the covenant chain of the said deed and treaties, you are, in my name, to assure the said nations, that I am come by his majesty's order, to destroy all the said forts, and to build such others, *as shall protect*

and secure the said lands to them, their heirs and successors for ever, according to the intent and spirit of the said treaty; and I do therefore call upon them to take up the hatchet, *and come and take possession of their own lands.*"

That general Braddock and the American governors, were *not* singular in their opinion, as to the right of the Six Nations to the land *over* the Alleghany mountains, and on both sides of the river Ohio, quite to the Mississippi, is evident, from the memorials which passed between the British and French courts in 1755.

In a memorial delivered by the king's ministers on the 7th June, 1755, to the duke Mirepoix, relative to the pretensions of France to the above-mentioned lands, they very justly observed—"As to the exposition, which is made in the French memorial of the 15th article of treaty of Utrecht, the court of Great Britain does not think it can have any foundation, either by the words or the intention of this treaty.

"1st, The court of Great Britain cannot allow of this article relating only to the persons of the savages, and *not their country:* the words of this treaty are clear and precise, That is to say, The *Five Nations*, or Cantons, are subject to the dominion of Great Britain,—which, by the received exposition of all treaties, must relate to the *country*, as well as to the persons of the inhabitants;—it is what France has acknowledged, in the most solemn manner:—She had well weighed the importance of this acknowledgment at the time of signing this treaty, and Great Britain can never give it up. The countries possessed by these Indians *are very well known, and are not at all so undetermined*, as it is pretended in the memorial; they *possess* and *make them over as other proprietors do, in all other places.*"

"5th, Whatever pretext might be alleged by France, in considering these countries as the appurtenances of Canada; *it is a certain truth that they have belonged, and* (as they have not been given up, or made over to the English) *belong still to the same Indian nations;* which, by the fifteenth article of the treaty of Utrecht, France agreed *not* to molest,—Nullo in posterum impedimento, aut molestia afficiant."

"Notwithstanding all that has been advanced in this article, the court of Great Britain *cannot* agree to France having the least title to the river Ohio, and the *territory in question.* [N. B. This was all the country, from the Alleghany mountains to the Ohio, and down the same, and on both sides thereof to the river Mississippi.]*

"Even that of possession is not, nor can it be alleged on this occasion; since France cannot pretend to have had any such before the treaty of Aix-la-Chapelle, nor since, unless it be that of certain *forts*, unjustly erected lately on the lands which evidently belong to the Five Nations, or which these have made over to the crown of Great Britain or its subjects, as may be proved by treaties and acts of the greatest authority.—What the court of Great Britain *maintained, and what it insists upon, is, That the Five Nations of the Iroquois, acknowledged* by France to be the subjects of Great Britain, *are, by* origin, *or by right of conquest, the lawful proprietors of the river Ohio, and the territory in question:* And as to the territory, which has been yielded and made over by these people to Great Britain (which cannot but be owned must be the most just and lawful manner of making an acquisition of this sort) she reclaims it, as belonging to her, having continued cultivating it for above twenty years past, and having made settlements in several parts of it, from the sources even of the Ohio to Pichawillanes, in the centre of the territory between the Ohio and the Wabash."

In 1755, the lords commissioners for trade and plantations were so solicitous to ascertain the territory of the Six Nations, that Dr. Mitchel, by their desire, published a large map of North America; and Mr. Pownall, the present secretary of the board of trade, then certified, as appears on the map,—That the doctor was furnished with documents for the purpose from that board. In this map, Dr. Mitchel observes, "that the Six Nations have extended their territories, ever since the year 1672, when they subdued and were incorporated with the ancient *Shawanese*, the native proprietors of these countries, and the river Ohio: besides which, they likewise claim a right of conquest over the Illinois, and all the Mississippi, as far as they extend. This," he adds, "is confirmed by their own claims and possessions in 1742, which include all the bounds here laid down, and none have ever thought fit to dispute them." And, in confirmation of this right of the Six Nations to the country on the Ohio, as mentioned by the king's ministers, in their memorial to the duke of Mirepoix, in 1755, we would just remark, that the Six Nations, Shawanese, and Delawares, were in the actual occupation of the lands *southward* of the great Kenhawa for some time after the French had encroached upon the river Ohio; and that in the year 1752, these tribes had a large town on Kentucky river, two hundred and thirty eight miles below the *Scioto:* That in the year 1753 they resided and hunted on the *southerly* side of the river Ohio, in the low country, at about three hundred and twenty miles below the Great Kenhawa; and in the year 1755, they

* The French claimed it in 1763. At the peace of 1815, the British negociators at Ghent set up the like claim which they had refused to the French, and made it a *sine qua non:* but they retraced their steps.

had also a large town opposite to the mouth of the Scioto; at the *very place*, which is the *southern* boundary line of the tract of land applied for by Mr. Walpole and his associates. But it is a certain fact, that the Cherokees never had any towns or settlements in the country southward of the great Kenhawa; that they do not hunt there, and that neither the Six Nations, Shawanese, nor Delawares, do *now* reside or hunt on the southerly side of the river Ohio, nor did not for several years before they sold the country to the king. These are facts which can be easily and fully proved.

In October, 1768, at a congress held with the Six Nations at Fort Stanwix, they observed to sir William Johnson:—"Now, brother, you who know all our affairs, must be sensible that our rights go much farther to the *southward* than the *Kenhawa*,—and that we have a very good and clear title as far *south* as the *Cherokee river*, which we cannot allow to be the right of any other Indians, without doing wrong to our posterity, and acting unworthy those warriors who fought and conquered it;—we therefore expect this our right will be considered."

In November, 1768, the Six Nations sold to the king all the country on the southerly side of the river Ohio, as far as the Cherokee river; but notwithstanding that sale, as soon as it was understood in Virginia, that government *favoured* the pretensions of the Cherokees, and that Dr. Walker and colonel Lewis (the commissioners sent from that colony to the congress at Fort Stanwix) had returned from thence, the late lord Bottetourt sent these gentlemen to Charleston, South Carolina, to endeavour to convince Mr. Stuart, the southern superintendent of Indian affairs, of the necessity of enlarging the boundary line which he had settled with the Cherokees;—and to run it from the *Great Kenhawa* to Holston's river. These gentlemen were appointed commissioners by his lordship, as they had been long conversant in Indian affairs, and were well acquainted with the actual extent of the Cherokee country.—Whilst these commissioners were in South Carolina, they wrote a letter to Mr. Stuart, as he had been but a very few years in the Indian service, (and could not, from the nature of his former employment, be supposed to be properly informed about the Cherokee territory,) respecting the claims of the Cherokees to the lands *southward* of the Great Kenhawa, and therein they expressed themselves as follows:

"CHARLESTON, South Carolina, Feb. 2, 1769.

"The country *southward of the Big Kenhawa was never claimed by the Cherokees*, and now is the property of the crown, as sir William Johnson purchased it of the Six Nations at a very considerable expense, and took a deed of cession from them at Fort Stanwix."

In 1769, the house of burgesses of the colony of Virginia represented to lord Bottetourt, "That they have the greatest reason to fear the said line (meaning the boundary line, which the lords commissioners for trade and plantations have referred to, in the map annexed to their lordships' report) if confirmed, would constantly open to the Indians, and others *enemies* to his majesty, a free and easy ingress to the heart of the country on the Ohio, Holston's river, and the Great Kenhawa; whereby the settlements which may be attempted in these quarters will, in all probability, be utterly destroyed, and *that great extent of country* [at least eight hundred miles in length] *from the mouth of the Kenhawa* to the *mouth of the Cherokee river*, extending eastward as far as the Laurel Hill, *so lately ceded to his majesty, to which no tribe of Indians at present set up any pretensions, will be entirely abandoned to the Cherokees;* in consequence of which, claims *totally destructive* of the true interest of his majesty, may at some future time arise, *and acquisitions justly ranked among the most valuable of the late war be altogether lost.*"

From the foregoing detail of facts, it is obvious,

1st. That the country *southward* of the *Great Kenhawa*, at least as far as the Cherokee river, originally belonged to the Shawanese.

2d. That the Six Nations, in virtue of their conquest of the Shawanese, became the lawful proprietors of that country.

3d. That the king, in consequence of the grant from the Six Nations, made to his majesty at Fort Stanwix in 1768, is *now* vested with the undoubted right and property thereof.

4th. That the Cherokees *never* resided, nor hunted in that country, and have *not* any kind of right to it.

5th. That the house of burgesses of the colony of Virginia have, upon good grounds, asserted, [such as properly arise from the nature of their stations, and proximity to the Cherokee country,] that the Cherokees had not any just pretensions to the territory southward of the Great Kenhawa.

And lastly, That neither the Six Nations, the Shawanese, nor Delawares, do *now* reside or hunt in that country.

From these considerations, it is evident no possible injury can arise to his majesty's service,—to the Six Nations and their confederacy, or to the Cherokees by permitting us to settle the *whole* of the lands comprehended within our contract with the lords commissioners of the treasury. If, however, there has been any treaty held with the Six Nations, since the cession made to his majesty at Fort Stanwix, whereby the faith of the crown is pledged, both to the Six Nations and the Cherokees, that no settlements should

be made beyond the line marked on their lordships' report; we say, if such agreement has been made by the orders of government with these tribes, (notwithstanding, as the lords commissioners have acknowledged, "the Six Nations had ceded the property in the lands, to his majesty")—we flatter ourselves, that the objection of their lordships in the second paragraph of their report, will be entirely obviated, by a specific clause being inserted in the king's grant to us, expressly *prohibiting* us from settling any part of the same, until such time as we shall have *first* obtained his majesty's allowance, and full consent of the Cherokees, and the Six Nations and their confederates, for that purpose.

III. In regard to the third paragraph of their lordships' report, That it was the principle of the board of trade, after the treaty of Paris, "to confine the western extent of settlements to such a distance from the sea-coast, as that these settlements should lie within the *reach* of the trade and commerce of this kingdom," &c., we shall not presume to controvert;—but it may be observed, that the settlement of the country over the Alleghany mountains, and on the Ohio, was not understood, either before the treaty of Paris, nor intended to be so considered by his majesty's proclamation of October, 1763, "as without the reach of the trade and commerce of this kingdom," &c.;—for, in the year 1748, Mr. John Hanbury, and a number of other gentlemen, petitioned the king for a grant of five hundred thousand acres of land over the Alleghany mountains, and on the river Ohio and its branches; and the lords commissioners for trade and plantations were then pleased to *report* to the lords committee of his majesty's most honourable privy council, "That the settlement of the country, lying to the westward of the great mountains, as it was the centre of the British dominions, would be for his majesty's interest, and the advantage and security of Virginia and the neighbouring colonies."

And on the 23d of February, 1748–9, the lords commissioners for trade and plantations *again* reported to the lords of the committee of the privy council, that they had "fully set forth the great utility and advantage of extending our settlements beyond the great mountains ('which report has been *approved* of by your lordships').—And as, by these new proposals, there is a great probability of having a much larger tract of the said country settled than under the former, we are of opinion, that it will be greatly for his majesty's service, and the welfare and security of Virginia, to comply with the prayer of the petition."

And on the 16th of March, 1748–9, an instruction was sent to the governor of Virginia to grant five hundred thousand acres of land over the Alleghany mountains to the aforesaid Mr. Hanbury and his partners (who are now *part* of the company of Mr. Walpole and his associates); and that instruction sets forth, that "such settlements will be for our interest, and the advantage and security of our said colony, as well as the advantage of the neighbouring ones; in as much as our loving subjects will be *thereby* enabled to cultivate a friendship, and carry on a *more* extensive commerce with the nations of Indians inhabiting those parts; and such examples may likewise induce the neighbouring colonies to turn their thoughts towards designs of the same nature." Hence we apprehend, it is evident, that a former board of trade, at which the late lord Halifax presided, was of opinion, that settlements *over* the Alleghany mountains were not *against* the king's interest, nor at such a distance from the sea-coast, as to be without "the reach of the trade and commerce of this kingdom," nor *where* its authority or jurisdiction could not be exercised. But the report under consideration suggests, that two capital objects of the proclamation of 1763, were, to confine future settlements to the "sources of the rivers which fall into the sea from the west and north-west," (or, in other words, to the *eastern* side of the Alleghany mountains) and to the three new governments of Canada, East Florida, and West Florida;—and to establish this fact, the lords commissioners for trade and plantations recite a part of that proclamation.

But if the *whole* of this proclamation is considered, it will be found to contain the nine following heads; viz.*

1st. To declare to his majesty's subjects, that he had erected four distinct and separate governments in America; viz. Quebec, East Florida, West Florida, and Grenada.

2d. To ascertain the respective boundaries of these four new governments.

3d. To testify the royal sense and approbation of the conduct and bravery, both of the officers and soldiers of the king's army, and of the reduced officers of the navy, who had served in North America, and to reward them, by grants of lands in Quebec, and in East and West Florida, without fee or reward.

4th. To hinder the governors of Quebec, East Florida, and West Florida, from granting warrants of survey, or passing patents for lands, beyond the bounds of their respective governments.

5th. To forbid the governors of any other colonies or plantations in America, from granting warrants or passing patents for lands, *beyond* the heads or sources of any of the rivers, which fall into the Atlantic ocean from the west or north-west, or upon any lands whatever, "which, not having been *ceded* to

* Vide the Proclamation in the Appendix, at the end of these papers, No. I.

or purchased by the king, are reserved to the said Indians, or any of them."

6th. To reserve, "for the present," under the king's sovereignty, protection, and dominion, "for the use of the said Indians," all the lands not included within the limits of the said three new governments, or within the limits of the Hudson's Bay company; as also, all the lands lying to the westward of the sources of the rivers, which fall into the sea from the west and north-west, and forbidding the king's subjects from making any purchases or settlements whatever, or taking possession of the lands so reserved, without his majesty's leave and license first obtained.

7th. To require all persons, who had made settlements on lands, not purchased by the king from the Indians, to remove from such settlements.

8th. To regulate the future purchases of lands from the Indians, within such parts as his majesty, by that proclamation, permitted settlements to be made upon.

9th. To declare, that the trade with the Indians should be free and open to all his majesty's subjects, and to prescribe the manner how it shall be carried on.

And lastly, To require all military officers, and the superintendents of Indian affairs, to seize and apprehend all persons who stood charged with treasons, murders, &c. and who had fled from justice, and taken refuge in the reserved lands of the Indians, to send such persons to the colony, where they stood accused.

From this proclamation, therefore, it is obvious, that the sole design of it, independent of the establishment of the three new governments, ascertaining their respective boundaries, rewarding the officers and soldiers, regulating the Indian trade, and apprehending felons, was to convince the Indians "of his majesty's justice and determined resolution to remove all reasonable cause of discontent," by interdicting all settlements on land not ceded to or purchased by his majesty; and declaring it to be, as we have already mentioned, his royal will and pleasure, "for the *present*, to reserve, under his sovereignty, protection, and dominion, for the *use* of the Indians, all the land and territories lying to the westward of the sources of the rivers which fall into the sea from the west and north-west."—Can any words express more decisively the royal intention?—do they not explicitly mention, That the territory is, at *present*, reserved, under his majesty's protection, for the *use* of the Indians?—And as the Indians had no *use* for those lands which are bounded *westerly* by the *south-east* side of the river Ohio, either for residence or hunting, they were willing to sell them; and accordingly did sell them to the king in November, 1768, (the occasion of which sale, will be fully explained in our observations on the succeeding paragraphs of the report.) —Of course, the proclamation, so far as it regarded the settlement of the lands included within that purchase, has absolutely and undoubtedly ceased.—The late Mr. Grenville, who was, at the time of issuing this proclamation, the minister of this kingdom, always admitted, that the design of it was totally accomplished, so soon as the country was *purchased from the natives*.

IV. In this paragraph, the lords commissioners for trade and plantations mentions two reasons, for his majesty's entering into engagements with the Indians, for fixing a *more precise and determinate boundary line*, than was settled by the proclamation of October, 1763, viz.

1st. Partly for want of precision in the one intended to be marked by the proclamation of 1763.

2d. And partly from a consideration of justice in regard to *legal titles to lands*.

We have, we presume, fully proved, in our observations on the third paragraph,—That the design of the proclamation, so far as related to lands westward of the Alleghany mountains, was for no other purpose than to *reserve* them, under his majesty's protection, for the present, for the *use* of the Indians; to which we shall only add, that the line established by the proclamation, so far as it concerned the lands in question, could not possibly be fixed and described with more *precision*, than the proclamation itself describes it; for it declares, That "all the lands and territories lying to the westward of the sources of the rivers, which *fall into the sea from the west and north-west*," should be reserved under his majesty's protection.

Neither, in our opinion, was his majesty induced to enter into engagements with the Indians, for fixing a more precise and determinate boundary, "partly from a consideration of justice, in regard to *legal titles to lands*," for there were *none* such (as we shall prove) comprehended within the tract *now* under consideration.

But for a full comprehension of all the reasons for his majesty's "entering into engagements with the Indians, for fixing a more precise and determinate boundary line," than was settled by the royal proclamation of October, 1763, we shall take the liberty of stating the following facts:—In the year 1764, the king's ministers had it then in contemplation, to obtain an act of parliament for the proper regulation of the Indian commerce; and providing a fund, (by laying a duty on the trade) for the support of superintendents, commissaries, interpreters, &c., at particular forts in the Indian country, *where the* trade was to be carried on: and as a part of this system it was thought proper, in order to

avoid future complaints from the Indians, on account of encroachments on their hunting grounds, to purchase a large tract of territory from them, and establish, with their consent, a respectable *boundary line*, beyond which his majesty's subjects should *not* be permitted to settle.

In consequence of this system, orders were transmitted to sir William Johnson in the year 1764, to call together the Six Nations, —lay this proposition of the *boundary* before them, and take their opinion upon it.—This, we apprehend, will appear evident from the following speech made by sir William to the Six Nations, at a conference which he held with them, at Johnson-hall, May the 2d, 1765.

"BRETHREN,—The last but the most important affair I have at this time to mention, is with regard to the settling *a boundary between you and the English.* I sent a message to some of your nations some time ago, to acquaint you, that I should confer with you at this meeting upon it. The king, whose generosity and forgiveness you have already experienced, being very desirous to put a final end to disputes between his people and *you, concerning lands*, and to do you strict justice, has fallen upon the plan of a boundary between our provinces and the Indians (which no white man shall dare to invade) as the best and surest method of ending such like disputes, and securing your property to you, beyond a possibility of disturbance. This will, I hope, appear to you so reasonable, so just on the part of the king, and so advantageous to you and your posterity, that I can have no doubt of your cheerfully joining with me in settling such a division line, as will be best for the advantage of both white men and Indians, and as shall best agree with the extent and increase of each province, and the governors, whom I shall consult upon that occasion, as soon as I am fully impowered; but in the mean time I am desirous to know in what manner you would choose to extend it, and what you will heartily agree to and abide by, in general terms. At the same time I am to acquaint you, that whenever the whole is settled, and that it shall appear you have so far consulted the increasing state of our people, as to make any convenient cessions of ground where it is most wanted, that *then* you will receive a considerable present in return for your friendship."

To this speech the sachems and warriors of the Six Nations, after conferring some time among themselves, gave an answer to sir William Johnson, and agreed to the proposition of the boundary line;—which answer, and the other transactions of this conference, sir William transmitted to the office of the lords commissioners for trade and plantations.

From a change of the administration, which formed the above system of obtaining an act of parliament for regulating the Indian trade, and establishing the boundary line, or from some other public cause unknown to us, no measures were adopted, until the latter end of the year 1767, for completing the negotiation about this boundary line.—But in the mean time, viz. between the years 1765 and 1768, the king's subjects removed in *great* numbers from Virginia, Maryland, and Pennsylvania, and settled over the mountains; upon which account the Six Nations became so irritated that in the year 1766 they killed several persons, and denounced a general war against the middle colonies; and to appease them, and to avoid such a public calamity, a detachment from the 42d regiment of foot was that year sent from the garrison of Fort Pitt, to remove such settlers as were seated at Red Stone Creek, &c., but the endeavours and threats of this detachment proved ineffectual, and they returned to the garrison without being able to execute their orders. The complaints of the Six Nations however continuing and *increasing*, on account of their settling of their lands over the mountains, general Gage wrote to the governor of Pennsylvania on the 7th of December, 1767, and after mentioning these complaints, he observed, "You are a witness how little attention has been paid to the several proclamations that have been published; and that even the removing those people from the lands in question, which was attempted this summer by the garrison at Fort Pitt, has been only a temporary expedient. We learn they are returned again to the same encroachments on Red Stone Creek and Cheat River, in greater numbers than ever."*

On the 5th of January, 1768, the governor of Pennsylvania sent a message to the general assembly of the province, with the foregoing letter from general Gage,—and on the 13th the assembly, in the conclusion of a message to the governor on the subject of Indian complaints, observed, "To obviate which cause of their discontent, and effectually to establish between them and his majesty's subjects a durable peace, we are of opinion, that a speedy confirmation of the *boundary*, and a just satisfaction made to them for their lands on this side of it, are absolutely necessary. By this means all their present complaints of encroachments will be removed, and the people on our frontiers will have a sufficient country to settle or hunt in *without* interfering with them."

On the 19th of January, 1768, Mr. Galloway, the speaker of the assembly of Pennsylvania, and the committee of correspondence, wrote on the subject of the Indians' disquietude, by order of the house, to their agents Richard Jackson and Benjamin Franklin, es-

* See the sequel of this paper.

quires, in London, and therein they said, "That the delay of the confirmation of the boundary, the natives have warmly complained of, and that although they have received no consideration for the lands *agreed* to be ceded to the crown on our side of the boundary, yet that its subjects are daily settling and occupying those very lands."

In April, 1768, the legislature of Pennsylvania finding that the expectations of an Indian war were hourly increasing, occasioned by the *settlement of the land over* the mountains, not sold by the natives; and flattering themselves, that orders would soon arrive from England for the perfection of the boundary line, they voted the sum of one thousand pounds, to be given as a present, in blankets, strouds, &c., to the Indians upon the Ohio, with a view of moderating their resentment, until these orders should arrive: and the governor of Pennsylvania being informed, that a treaty was soon to be held at Fort Pitt by George Crogan, Esq., deputy agent of Indian affairs, by order of general Gage and sir William Johnson, he sent his secretary and another gentleman, as commissioners from the province, to deliver the above present to the Indians at Fort Pitt.

On the 2d of May, 1768, the Six Nations made the following speech at that conference:

"BROTHER,—It is not without grief that we see our country *settled* by you, without our knowledge or consent; and it is a long time since we complained to you of this grievance, which we find has not as yet been redressed; but settlements are still extending *further* into our country: some of them are made directly on our war-path, leading into our enemy's country, and we do not like it. Brother, you have *laws* among you to govern your people by; and it will be the strongest proof of the sincerity of your friendship, to let us see that you remove the people from our lands; as we look upon it, they will have time enough to settle them, when you have purchased them, and the country becomes yours."

The Pennsylvania commissioners, in answer to this speech, informed the Six Nations, that the governor of that province had sent four gentlemen with his proclamation and the act of assembly (making it *felony of death* without benefit of clergy, to continue on Indian lands) to such settlers over the mountains as were seated, within the limits of Pennsylvania, requiring them to vacate their settlements, but all to no avail: That the governor of Virginia had likewise, to as little purpose, issued his proclamations and orders, and that general Gage had twice *ineffectually* sent parties of soldiers to remove the settlers from Red Stone Creek and Monongahela.

As soon as Mr. Jackson and Dr. Franklin received the foregoing instructions from the general assembly of Pennsylvania, they waited upon the American minister, and urged the expediency and necessity of the boundary line being speedily concluded; and in consequence thereof, additional orders were immediately transmitted to sir William Johnson for that purpose.

It is plain therefore, that the proclamation of October, 1763, was not designed, as the lords commissioners for trade and plantations have suggested, to signify the policy of this kingdom, against settlements *over* the Alleghany mountains, after the king had actually purchased the territory; and that the true reasons for purchasing the lands comprised within that boundary were to avoid an Indian rupture, and give an opportunity to the king's subjects, quietly and lawfully to settle thereon.

V. Whether the lords commissioners for trade and plantations are well founded in their declarations, that the lands under consideration "are out of all advantageous intercourse with this kingdom," shall be fully considered in our observations on the sixth paragraph; and as to "the various propositions for erecting new colonies in the interior parts, which their lordships say, have been, in consequence of the extension of the boundary line, submitted to the consideration of government, particularly in that part of the country, wherein are situated the lands now prayed for, and the danger of complying with such proposals have been so obvious as to defeat every attempt for carrying them into execution,"—we shall only observe on this paragraph, that as we do not know what these propositions were, or upon what principle the proposers have been defeated, it is impossible for us to judge, whether they are any ways applicable to our case.—Consistent, however, with our knowledge, no more than one proposition, for the settlement of a part of the lands in question, has been presented to government, and that was from Dr. Lee, thirty-two other Americans, and two Londoners, in the year 1768, praying that his majesty would grant to them, without any purchase-money, two millions five hundred thousand acres of land, in one or more surveys, to be located between the thirty-eighth and forty-second degrees of latitude, over the Alleghany mountains, and on condition of their possessing these lands twelve years *without* the payment of any quit-rent, (the same not to begin until the whole two millions five hundred thousand acres were surveyed) and that they should be obliged to settle on two hundred families in twelve years:—surely, the lords commissioners did not mean this proposition as one that was similar, and would apply to the case now reported upon;—and especially as Dr. Lee and his associates did not propose, as we do, either to purchase the lands, or pay the quit-rents to

his majesty, neat and clear of all deductions, or be at the whole expense of establishing and maintaining the civil government of the country.

VI. In the sixth paragraph the lords commissioners observe, That "every argument on the subject, respecting the settlement of the lands in that part of the country now prayed for, is collected together with great force and precision in a representation made to his majesty by the lords commissioners for trade and plantations, in March, 1768."

That it may be clearly understood, what was the occasion of this representation, we shall take the liberty of mentioning, that on the first of October, 1767, and during the time that the earl of Shelburne was secretary of state for the southern department, an idea was entertained of forming, "at the expense of the crown," three *new* governments in North America, viz. one at Detroit (on the waters between lake Huron and lake Erie;) one in the Illinois country, and one on the lower part of the river Ohio; and in consequence of such idea, a reference was made by his lordship to the lords commissioners for trade and plantations, for their opinion upon these proposed *new* governments.

Having explained the cause of the representation, which is so very strongly and earnestly insisted upon by the lords commissioners for trade and plantations, as containing "every argument on the subject of the lands which is at present before your lordships;" we shall now give our reasons for apprehending, that it is so far from applying against our case, that it actually declares a permission would be given to settle the very lands in question.

Three principal reasons are assigned in the *representation*, as conducive to the great object of colonizing upon the continent of North America, viz.

"1st, Promoting the advantageous fishery carried on upon the *northern* coast.

"2dly, Encouraging the growth and culture of naval stores, and of raw materials, to be transported hither, in exchange for perfect manufactures and other merchandise.

"3dly, Securing a supply of lumber, provisions, and other necessaries for the support of our establishments in the American islands."

On the first of these reasons, we apprehend, it is not necessary for us to make many observations; as the provinces of New Jersey, Pennsylvania, Maryland, and Virginia, and the colonies *southward* of them, have *not*, and from the nature of their situation and commerce will *not*, promote the *fishery*, more, it is conceived, than the proposed Ohio colony. These provinces are, however, beneficial to this kingdom, in culture and exportation of different articles;—as it is humbly presumed the Ohio colony will likewise be, if the production of *staple commodities* is allowed to be within that description.

On the second and third general reasons of the representation we shall observe, that no part of his majesty's dominions in North America will require less *encouragement* "for the growth and culture of naval stores and raw materials; and for the supplying the islands with lumber, provisions," &c., than the solicited colony on the Ohio;—and for the following reasons:

First, The lands in question are excellent, the climate temperate, the native grapes, silkworms, and mulberry trees are every where; hemp grows spontaneously in the valleys and low lands; iron-ore is plenty in the hills; and no soil is better adapted for the culture of tobacco, flax, and cotton, than that of the Ohio.

Second, The country is well watered by several navigable rivers, communicating with each other; and by which, and a short land-carriage of only *forty miles*, the produce of the lands of the Ohio can, even now, be sent *cheaper* to the sea-port town of Alexandria, on the river Potomac (where general Braddock's transports landed his troops) than any kind of merchandise is at this time sent from *Northampton to London*.

Third, The river Ohio is, at all seasons of the year, navigable for large boats, like the West country barges, rowed only by four or five men; and from January to the month of April, large ships may be built on the Ohio, and sent laden with hemp, iron, flax, silk, &c., to this kingdom.

Fourth, Flour, corn, beef, ship-plank, and other necessaries, can be sent down the stream of Ohio to West Florida, and from thence to the islands, much cheaper and in better order, than from New York or Philadelphia.

Fifth, Hemp, tobacco, iron, and such bulky articles, can also be sent down the stream of the Ohio to the sea, at least fifty per centum cheaper than these articles were ever carried by a land-carriage, of only sixty miles, in Pennsylvania; where wagonage is cheaper than in any other part of North America.

Sixth, The expense of transporting British manufactures from the sea to the Ohio colony, will not be so much, as is now paid and must ever be paid, to a great part of the counties of *Pennsylvania*, *Virginia*, and *Maryland*.

From this state of facts we apprehend, it is clear, that the lands in question are altogether capable, and will advantageously admit, from their fertility, situation, and the small expense attending the exporting the produce of them to this kingdom, "of *conducing* to the great object of colonizing upon the continent of North America:" but that we may more particularly elucidate this important point, we shall take the freedom of observing, —That it is *not* disputed, but even acknow-

ledged, by the very report now under consideration,—that the climate and soil of the Ohio are as favourable as we have described them;—and as to the native silk-worms, it is a truth, that *above* ten thousand weight of cocoons was, in August, 1771, sold at the public filature in Philadelphia; and that the silk produced from the *native* worm is of a good quality, and has been much approved of in this city. As to hemp, we are ready to make it appear, that it grows, as we have represented, spontaneously, and of a good texture, on the Ohio. When, therefore, the increasing dependence of this kingdom upon *Russia*, for this very article, is considered, and that none has been exported from the *sea-coast American colonies*, as their soil will not easily produce it,—this dependence must surely be admitted as a subject of great national consequence, and worthy of the serious attention of government.—Nature has pointed out to us, where any quantity of hemp can be soon and easily raised, and by that means, not only a large amount of specie may be retained yearly in this kingdom, but our own subjects can be employed most advantageously, and paid in the manufactures of this kingdom.—The state of the Russian trade is briefly thus:

From the year 1722 to 1731, two hundred and fifty ships were, on a medium, sent each year to St. Petersburg, Narva, Riga, and Archangel, for *hemp*, - - - -	250 ships.
And from the year 1762 to 1771, five hundred ships were also sent for that purpose, - -	500
Increase in ten years,	250 ships.

Here then, it is obvious, that in the last ten years there was, on a medium, an increase of two hundred and fifty ships in the Russian trade. Can it be consistent with the wisdom and policy of the greatest naval and commercial nation in the world, to depend wholly on foreigners for the supply of an article, in which is included the very existence of her navy and commerce? Surely not; and especially when God has blessed us with a country yielding *naturally* the very commodity, which draws our money from us, and renders us *dependant* on Russia for it.*

As we have only hitherto generally stated the small expense of carriage between the waters of Potomac and those of the Ohio, we shall now endeavour to show how very ill-founded the lords of trade and plantations are in the fifth paragraph of their report, viz. That the lands in question "are out of all advantageous *intercourse* with this kingdom." In order, however, that a proper opinion may be formed on this important article, we shall take the liberty of stating the particular expense of carriage, even during the last *French* war, (when there was no back carriage from Ohio to Alexandria) as it will be found, it was even then only about a halfpenny per pound, as will appear from the following account, the truth of which we shall fully ascertain, viz.

From Alexandria to Fort Cumberland, by water,	1*s.* 7*d.*	*per cwt.*
From Fort Cumberland to Red Stone Creek, at fourteen dollars per wagon load; each wagon carrying fifteen hundred weight, - -	4 2	
	5 9	

Note. The distance was then seventy miles, but by a new wagon road, lately made, it is now but forty miles—a saving, of course, of above one half the 5*s.* 9*d.* is at *present* experienced.

If it is considered that this rate of carriage was *in time of war*, and when there were no inhabitants on the Ohio, we cannot doubt but every intelligent mind will be satisfied, that it is now much *less* than is daily paid in London for the carriage of coarse woollens, cutlery, iron ware, &c., from several counties in England.

The following is the cost of carriage from Birmingham, &c. viz.

From Birmingham to London, is, - -	4*s.*	*per cwt.*
From Walfall in Staffordshire, - -	5	
From Sheffield, -	8	
From Warrington, -	7	

If the lands which are at present under consideration are as the lords commissioners for trade and plantations say, "out of all advantageous intercourse with this kingdom," we are at a loss to conceive by what standard that board calculates the rule of "advantageous intercourse."—If the king's subjects, settled over the Alleghany mountains, and on

* "It is in settlements on the Mississippi and Ohio that we must look for hemp and flax, which may, in those fertile tracts, be cultivated in such abundance, as to enable us to undersell all the world, as well as supply our own consumption. It is on those high, dry, and healthy lands, that vineyards would be cultivated to the best advantage, as many of those hills contain quarries of stone, and not in the low, unhealthy sea-coasts of our present colonies. Of such infinite consequence to Britain is the production of staples in her colonies, that were all the people of the northern settlements, and all of the tobacco ones (except those actually employed in raising tobacco) now spread over those parts of our territories to the southward and westward, and consequently employed in the same manner as the few are who do reside therein, Britain, in such a case, would export to the amount of above *nine millions more* in manufactures, &c., than she does at present, without reckoning the infinite increase in public revenue, freight, and seamen, which would accrue. To enlarge upon all the advantages of such a change, would be impertinence itself."—*Political Essays concerning the British Empire.*

the Ohio, within the *new*-erected county of Bedford, in the province of Pennsylvania, are altogether clothed with British manufactures, as is the case, is that country "out of all advantageous intercourse with this kingdom?" —If merchants in London are now actually shipping British manufactures for the use of the very settlers on the lands in question, does that exportation come within the lords commissioners description of what is "out of all advantageous intercourse with this kingdom?" In short, the lords commissioners admit, upon their own principles, that it is a political and advantageous intercourse with this kingdom, when the settlements and settlers are confined to the *eastern* side of the Alleghany mountains. Shall then the expense of carriage, even of the very coarsest and heaviest clothes, or other articles, from the mountains to the Ohio, only about seventy miles, and which will not, at most increase the price of carriage *above* a halfpenny a yard, convert the trade and connexion with the settlers on the Ohio, into a predicament "that shall be, as the lords commissioners have said, *out* of all advantageous intercourse with this kingdom?"—On the whole, "if the poor Indians in the remote parts of North America are *now* able to pay for the linens, woollens, and iron ware they are furnished with by English traders, though Indians have nothing but what they get by hunting, and the goods are loaded with all the impositions fraud and knavery can contrive, to enhance their value; will not industrious English farmers," employed in the culture of hemp, flax, silk, &c., "be able to pay for what shall be brought to them in the fair way of commerce;" and especially when it is remembered, that there is no other *allowable* market for the sale of these articles, than in this kingdom?—And if "the growths of the country find their way out of it, will not the manufactures of this kingdom, where the hemp, &c. must be sent to, find their way into it?"

Whether Nova Scotia, and East and West Florida have yielded advantages and returns equal to the enormous sums expended in founding and supporting them, or even advantages, such as the lords commissioners for trade and plantations, in their representation of 1768, seemed to expect, it is not our business to investigate;—it is, we presume, sufficient for us to mention, that those "many principal persons in Pennsylvania," as is observed in the representation, whose names and association lie before your majesty in council, for the purpose of making settlements in Nova Scotia," have, several years since, been convinced of the impracticability of exciting settlers to move from the middle colonies, and settle in that province; and even of those who were prevailed on to go to Nova Scotia, the greater part of them returned with great complaints against the severity and length of the winters.

As to East and West Florida, it is, we are persuaded, morally impossible to force the people of the *middle* provinces, between thirty-seven and forty degrees north latitude (where there is plenty of vacant land in their own temperate climate) to remove to the scorching, unwholesome heats of these provinces.* The inhabitants of Montpelier might as soon and easily be persuaded to remove to the northern parts of Russia, or to Senegal.—In short, it is contending with nature, and the experience of all ages, to attempt to compel a people, *born* and *living* in a temperate climate, and in the neighbourhood of a rich, healthful, and uncultivated country, to travel several hundred miles to a sea-port in order to make a *voyage to sea*; and settle either in extreme hot or cold latitudes. If the county of York was vacant and uncultivated, and the more southern inhabitants of this island were in want of land, would they suffer themselves to be driven to the *North of Scotland?*—Would they not, in spite of all opposition, first possess themselves of that fertile country?—Thus much we have thought necessary to remark, in respect to the general principles laid down in the *representation* of 1768; and we hope we have shown, that the arguments therein made use of, do not in any degree militate against the subject in question; but that they were intended, and do solely apply to "new colonies proposed to be established," as the representation says, "at an *expense*, to this kingdom, at the distance of above fifteen hundred miles from the sea, which from their inability to find returns wherewith to pay for the manufactures of Great Britain, will probably lead to manufacture for themselves, as they would," continues the representation, "be separated from the old colonies by immense tracts of unpeopled desert."

It now only remains for us to inquire, whether it was the intention of the lords commissioners for trade and plantations in 1768, that the territory, which would be included within the *boundary* line, then negotiating with the Indians (and which was the one, that was that year perfected) should continue a useless wilderness, or be settled and occupied by his majesty's subject.—The very representation itself, which the present lords commissioners for trade and plantations say,

* "We think of nothing but extending our settlements still further on these *pestiferous* sea-coasts, even to the sunken lagunes of East Florida, and the barren sands of Mobile and Pensacola. The only use of new settlements in North America, is for the people in the *northern* and other colonies, who want lands to make staple commodities for Britain, to remove to them: but *none* will ever go to Florida, or *thrive in it, more than* they have done in *Carolina* and *Georgia*. The climate of Florida is *more* intemperate, the lands *more* barren, and the situation *much worse* in every respect."—*State of Great Britain and America, by* Dr. Mitchell.

contains "every argument on the subject," furnishes us an ample and satisfactory solution to this important question. The lords commissioners in 1768, after pronouncing their opinion against the proposed three new governments, as above stated, declare, "They ought to be carefully guarded against, by encouraging the settlement of that extensive tract of sea-coast hitherto unoccupied; which, say their lordships, together with the liberty the inhabitants of the middle colonies *will have* (in consequence of the proposed boundary line with the Indians) of gradually extending themselves backwards, will more effectually and beneficially answer the object of encouraging population and consumption, than the erection of new governments; such gradual extension might, through the medium of a continual population, upon even the same extent of territory, preserve a communication of mutual commercial benefits between its extremest parts and Great Britain, impossible to exist in colonies separated by immense tracts of unpeopled desert."—Can any opinion be more clear and conclusive, in favour of the proposition which we have humbly submitted to his majesty? —for their lordships positively say, that the inhabitants of the middle colonies *will have* liberty of gradually extending themselves *backwards*; but is it not very extraordinary, that after near two years deliberation, the present lords commissioners for trade and plantations should make a report to the lords of the committee of the privy council, and therein expressly refer to that opinion of 1768, in which they say, "every argument on the subject is collected together with great force and precision," and yet that, almost in the same breath, their lordships should contravene that very opinion, and advise his majesty "to check the progress of these settlements?"—And that "settlements in that distant part of the country ought to be discouraged as much as possible, and another proclamation should be issued declaratory of his majesty's resolution, not to allow, for the present, any new settlement beyond the line;"—to wit, beyond the Alleghany mountains?—How strange and contradictory is this conduct?—But we forbear any strictures upon it;—and shall conclude our remarks on this head, by stating the opinion, at different times, of the lords commissioners for trade and plantations, on this subject.

In 1748, their lordships expressed the strongest desire to promote settlements over the mountains and on the Ohio.

In 1768, the then lords commissioners for trade and plantations declared, (in consequence of the boundary line at that time negotiating)—that the inhabitants of the middle colonies would have liberty of gradually extending themselves backwards.

In 1770, the earl of Hillsborough actually *recommended* the purchase of a tract of land over the mountains, sufficient for a new colony, and then went down to the lords commissioners of the treasury, to know whether their lordships would treat with Mr. Walpole and his associates, for such purchase.

In 1772, the earl of Hillsborough, and the other lords commissioners for trade and plantations, made a report on the petition of Mr. Walpole and his associates, and referred to the *representation* of the board of trade in 1768, "as containing *every* argument on the subject, collected together with force and precision;"—which representation declared, as we have shown, "That the inhabitants of the middle colonies *will have* liberty to extend backwards" on the identical lands in question; and yet, notwithstanding such reference, so strongly made from the present board of trade to the opinion of that board,—the earl of Hillsborough, and the other lords commissioners for trade and plantations, have now, in direct terms, *reported against* the absolute engagement and opinion of the board in 1768.

It may be asked, what was intended by the expressions in the *representation* of 1768, of gradually extending themselves *backwards?* It is answered, they were only in contradistinction to the proposal of erecting at that time three *new* governments at Detroit, &c.; and thereby exciting, as the representation says, the stream of population to various distant places. In short, it was, we think, beyond all doubt, the "precise" opinion of the lords commissioners in 1768, that the territory, within the boundary line, then negotiating, and since completed, would be sufficient at that time—to answer the object of population and consumption: and that, until that territory was fully occupied, it was not necessary to erect the proposed three new governments "at an expense to this kingdom," in places, as their lordships observed, "separated by immense "tracts of unpeopled desert."

To conclude our observations on the sixth paragraph, we would just remark,—That we presume we have demonstrated, that the inhabitants of the middle colonies cannot be compelled to exchange the soil and climate of these colonies, either for the severe colds of Nova Scotia and Canada, or the unwholesome heats of East and West Florida. Let us next inquire, what would be the effect of confining these inhabitants (if it was practicable) within narrow bounds, and thereby preventing them from exercising their natural inclination of cultivating lands?—and whether such restriction would not force them into manufactures, to rival the mother-country?—To these questions, the lords commissioners have, with much candour, replied, in their representation of 1768,—"We admit," said their lordships, "as an undeniable princi-

ple of *true* policy, that, with a view to *prevent* manufactures, it is necessary and proper to open an extent of territory for colonization, proportioned to an increase of people, as a large number of inhabitants, cooped up in narrow limits, without a sufficiency of land for produce, would be compelled to convert their attention and industry to *manufactures*."—But their lordships at the same time, observe,—"that the *encouragement* given to the settlement of the colonies upon the sea-coast, and the effect which such encouragement has had, has already *effectually* provided for this object?"—In what parts of North America this encouragement has thus provided for population, their lordships have not mentioned. If the establishment of the governments of Quebec, Nova Scotia, and the Island of St. John's, or East and West Florida, was intended by their lordships as that effectual provision,—we shall presume to deny the proposition, by asserting, as an undoubted truth,—that although there is at least a million of subjects in the middle colonies, none have emigrated from thence, and settled in these *new* provinces;—and for that reason, and from the very nature of colonization itself, we affirm, that none will ever be induced to exchange the healthy, temperate climate of Virginia, Maryland, and Pennsylvania, for the extreme colds or heats of Canada and Nova Scotia, or East and West Florida:—In short, it is not in the power of government to give any encouragement, that can compensate for a desertion of friends and neighbours,—dissolution of family connexions, and abandoning a soil and climate infinitely superior to those of Canada, Nova Scotia, or the Floridas?—Will not therefore the inhabitants of the middle provinces, whose population is great beyond example,* and who have already made some advances in manufactures, "by confining them to their present narrow limits," be necessarily compelled to convert their whole attention to that object? How then shall this, in the nature of things, be prevented, except, as the lords commissioners have justly remarked, "by opening an extent of territory proportioned to their increase?"—But *where* shall a territory be found proper for "the *colonization* of the inhabitants of the middle colonies?" We answer,—in the very country, which the lords commissioners have said that the inhabitants of these colonies would have liberty to settle in;—a country which his majesty has purchased from the Six Nations; one, where several thousands of his subjects are already settled, and one, where the lords commissioners have acknowledged, "a gradual extension might, through the medium of a continued population, upon even the same extent of territory, *preserve a communication* of mutual commercial benefits *between its extremest parts* and Great Britain."*

VII. This paragraph is introduced, by referring to the extract of a letter from the commander-in-chief of his majesty's forces in North America, laid by the earl of Hillsborough before the lords commissioners for trade and plantations;—but as their lordships have not mentioned either the general's name, or the time *when* the letter was written, or what occasioned his delivering his opinion upon the subject of *colonization in general*, in the "*remote countries*"—we can only conjecture, that general Gage was the writer of the letter, and that it was wrote about the year 1768,—when the plan of the three new governments was under the consideration of the then lords commissioners for trade and plantations, and before the lands on the Ohio were bought from, and the boundary line established with the Six Nations.—Indeed, we think it clear, that the general had no other lands, at that time, under his consideration, than what he calls "remote countries," such as the *Detroit*, *Illinois*, and the lower parts of the Ohio;—for he speaks of "foreign countries," from which it "would be *too* far to transport some kind of naval stores," and for the same reason could not, he says, supply the sugar islands "with lumber and provisions." He mentions also, "planting colonies at so vast a distance, that the very long transportation (of silk, wine, &c.) must probably make them too dear for any market," and where "the inhabitants could not have any commodities to barter for manufactures, except *skins and furs*." And what, in our opinion, fully evinces that the general was giving his sentiments upon settlements at Detroit, &c., and not on the territory in question, is, that he says "it will be a question likewise, whether colonization of this kind could be effected without an Indian war, and fighting for every inch of the ground." Why the lords commissioners for trade and plantations should incumber their report with the opinion

* "Besides staple commodities, there is another more material point to be considered in the colonies, which is their great and daily *increase*; and for which, unless we make provision in time, they can never subsist by a dependence on Britain. There are at present (in the year 1770) nigh *three* millions of people in them, who may, in twenty or thirty years, increase to *six* millions, as many as there are in England."—*Wynne's History of the British Empire in America*, vol. ii. p. 398.

* Thus the use the nation has for new settlements and acquisitions in North America is for the *great increase* of the people who are already there, and to enable them to subsist by a *dependence upon her*; which they can never do, *unless they extend their settlements*.—*Wynne's History*, vol. ii. p. 399.

"Unprejudiced men well know, that all the penal and prohibitory laws that ever were thought of, will not be sufficient to prevent manufactures in a country whose inhabitants surpass the number that can subsist the husbandry of it; and this will be the case *soon*, if our people remain confined within the mountains, &c."—*The Interest of Great Britain considered with regard to the Colonies*, p. 17. Published in 1761.

of general Gage, on what he calls the settlement of a "foreign country," that could not be effected without "fighting for every inch of ground" and how their lordships could apply that case, to the settlement of a territory, purchased by his majesty near four years ago, and now inhabited by several thousand British subjects, whom the Indians themselves, living on the northern side of the Ohio (as shall be fully shown in the course of these observations) have earnestly requested may be immediately governed, we confess we are wholly at a loss to comprehend.

VIII. The eighth paragraph highly extols, not only the accuracy and precision of the foregoing representation of the lords of trade in 1768, (which, as has been before observed, expressed, that the inhabitants of the middle colonies would *have liberty to settle over* the mountains, and on the Ohio,) but also the abovementioned letter from the commander-in-chief in America; and at the same time introduces the sentiments of Mr. Wright, governor of Georgia, "on the subject of large grants in the interior parts of America."

When this letter was written, what was the occasion of the governor's writing it,—whether he was then, from his own knowledge, acquainted with the situation of the country over the mountains,—with the disposition of the inhabitants of the middle colonies,—with the capability of the Ohio country, from its soil, climate, or communication with the river Potomac, &c., to supply this kingdom with *silk*, *flax*, *hemp*, &c.—and whether the principal part of Mr. Wright's estate is on the *sea-coast* in Georgia,—are facts which we wish had been stated, that it might be known whether governor Wright's "knowledge and experience in the affairs of the colonies ought, as the lords of trade mention, to give great weight to his opinion" on the present occasion.

The doctrine insisted upon by governor Wright appears to us reducible to the following propositions:

1st, That if a vast territory be granted to any set of gentlemen, who really mean to people it,—and actually do so, it *must* draw and carry out a great number of people from Great Britain.

2d, That they will soon become a kind of separate and independent people; who will set up for themselves,—will soon have manufactures of their own,—will neither take supplies from the mother-country, nor the provinces at the back of which they are settled:—That being at such a distance from the seat of government, from courts, magistrates, &c., and out of the control of law and government, they will become a receptacle for offenders, &c.

3d, That the sea-coast should be thick settled with inhabitants, and be well cultivated and improved, &c.

4th, That his ideas are not chimerical: that he knows *something* of the situation and state of things in America; and, from some little occurrences that have happened, he can very easily figure to himself what may, and, in short, what will certainly happen, if not prevented in time.

On these propositions we shall take the liberty of making a few observations.

To the first, we answer,—We shall, we are persuaded, satisfactorily prove, that in the middle colonies, viz. New Jersey, Pennsylvania, Maryland, and Virginia, there is hardly any *vacant land*, except such as is monopolized by great landholders, for the purpose of selling at high prices; that the poor people of these colonies, with large families of children, cannot pay these prices; and that several thousand families, for that reason, have already settled upon the Ohio;—that we do not wish for, and shall not encourage one single family of his majesty's *European subjects* to settle there [and this we have no objection to be prevented from doing,] but shall wholly rely on the voluntary superflux of the inhabitants of the middle provinces for settling and cultivating the lands in question.

On the *second*,—It is not, we presume, necessary for us to say more, than that all the conjectures and suppositions "of being a kind of separate and independent people," &c. entirely lose their force, on the proposition of a government being established on the grant applied for, as the lords of trade themselves acknowledged.

On the *third*,—We would only briefly remark, that we have fully answered this objection in the latter part of our answer to the sixth paragraph.

And as the *fourth* proposition is merely the governor's declaration of his knowledge of *something* of the situation and state of things in America, and what, from some little occurrences, that have already really happened, he can very easily figure to himself what may and will certainly happen, if not prevented in time:—We say, That as the governor has not mentioned what these little occurrences are,—we cannot pretend to judge, whether what he figures to himself, is any ways relative to the object under consideration, or, indeed, what else it is relative to?

But as the lords commissioners for trade and plantations have thought proper to insert in their report the abovementioned letters from general Gage and governor Wright, it may not be improper for us to give our opinion of his majesty's house of burgesses of the dominion of Virginia, on the very point in question, as conveyed to his majesty in their address of the 4th August, 1767, and

delivered the latter end of that year, to the lords commissioners for trade and plantations, by Mr. Montague, agent for the colony.—The house of burgesses say,—"We humbly hope, that we shall obtain your royal indulgence, when we give it as our opinions, that it will be for your majesty's service, and the interest of your American dominions in general, to continue the encouragements" (which were a total exemption from any consideration-money whatsoever, and a remission of quit-rent for ten years, and of all kinds of taxes for fifteen years) "for settling those frontier lands." By this means, the house observed, "New settlements will be made by people of property, obedient subjects to government; but if the present restriction should continue, we have the strongest reason to believe, that country will become the resort of fugitives and vagabonds, defiers of law and order, and who in time may form a body dangerous to the peace and civil government of this colony."

We come now to the consideration of the 9th, 10th, and 11th paragraphs.

In the 9th, the lords commissioners for trade and plantations observe, "That admitting the settlers over the mountains, and on the Ohio, to be as numerous as *report* states them to be," [and which we shall, from undoubted testimony, prove to be not less than five thousand families, of at least six persons to a family, independent of some thousand families, which are also settled *over* the mountains, within the limits of the province of Pennsylvania] yet their lordships say, "It operates strongly in point of argument *against* what is proposed." And their lordships add, "if the foregoing reasoning has any weight, it ought certainly to induce the lords of the committee of the privy council, to *advise* his majesty to take every method *to* CHECK the progress of these settlements; and *not* to make such grants of the land, as will have an immediate tendency to encourage them."

Having, we presume, clearly shown, that the country *southward* of the Great Kenhawa, quite to the Cherokee river, belonged to the Six Nations, and *not* to the Cherokees; that *now* it belongs to the king, in virtue of his majesty's purchase from the Six Nations; that neither these tribes, *nor* the Cherokees, do hunt between the great Kenhawa and the land opposite to the Scioto river; that, by the present boundary-line, the lords commissioners for trade and plantations would sacrifice to the *Cherokees* an extent of country of at least eight hundred miles in length, which his majesty has bought and paid for; that the real limits of Virginia do *not* extend westward, beyond the Alleghany mountains; that since the purchase of the country from the Six Nations, his majesty has not annexed it, nor any part of it, to the colony of Virginia; that there are no settlements made under *legal titles*, on any part of the lands we have agreed for with the lords commissioners of the treasury; that in the year 1748, the strongest marks of royal encouragement were given to settle the country *over* the mountains; that the *suspension* of this encouragement, by the proclamation of October, 1763, was merely temporary, until the lands were purchased from the natives;—that the avidity to settle these lands was so great, that large settlements were made thereon *before* they were purchased;—that although the settlers were daily exposed to the cruelties of the savages, neither a military force, nor repeated proclamations could induce them to vacate these lands; that the soil of the country over the mountains is excellent, and capable of easily producing hemp, flax, silk, tobacco, iron, wine, &c.;—that these articles can be cheaply conveyed to a seaport for exportation;—that the charge of carriage is so very small, it cannot possibly operate to the prevention of the use of British manufactures; that the king's purchasing the lands from the Indians, and fixing a *boundary-line* with them, was for the very purpose of his subjects settling them; and that the commissioners for trade and plantations in 1768,—declared, that the inhabitants of the middle colonies would have *liberty* for that purpose.

And to this train of facts, let us add, that at the congress, held with the Six Nations at Fort Stanwix in 1768, *when* his majesty purchased the territory on the Ohio, Messrs. Penn also bought from these nations a very extensive tract of country *over* the Alleghany mountains, and on that river *joining* to the very lands in question. That in the spring 1769, Messrs. Penn opened their *land-office* in Pennsylvania, for the *settling the country* which they had so bought at Fort Stanwix: and all such settlers as had seated themselves *over the mountains*, within the limits of Pennsylvania, *before* the lands were purchased from the natives, have *since* obtained titles for their plantations: That in 1771, a petition was presented to the assembly of the province of Pennsylvania, praying that a *new* county may be made *over* these mountains:—That the legislature of that province, in consideration of the great number of families settled *there*, within the limits of that province, did that year enact a law, for the erection of the lands over the mountains into a new county, by the name of Bedford county: That in consequence of such law, William Thompson, esq., was chosen to represent it in the general assembly: That a sheriff, coroner, justices of the peace, constables, and other civil officers are appointed and do reside over the mountains: That all the king's subjects, who are not less than five thousand families, who have made locations and settle

ments on the lands, southward of, and adjoining to the southern line of Pennsylvania, live there, without any degree of order, law, or government: That being in this lawless situation, continual quarrels prevail among them: That they have already infringed the *boundary-line*, killed several Indians, and encroached on the lands, on the opposite side of the Ohio; and that disorders of the most dangerous nature, with respect to the Indians, the *boundary-line*, and the *old colonies*, will soon take place among these settlers, if law and subordination are not immediately established among them.—Can these facts be possibly perverted so as to operate, either in point of argument or policy, *against* the proposition of governing the king's subjects on the lands in question.

It ought to be considered also, that we have agreed to pay as much for a small part of the cession made at Fort Stanwix, as the whole cession cost the crown, and at the same time to be at the entire expense of establishing and supporting the proposed new colony.*

The truth is, the inhabitants already settled on this tract of country are in so ungoverned and lawless a situation, that the very Indians themselves complain of it; so that, if they are not soon governed, an Indian war will be the inevitable consequence. This, we presume, is evident both from the correspondence of general Gage with the earl of Hillsborough,—and a speech of the chiefs of the Delawares, Munsies, and Mohickons, living on the Ohio, to the governors of Pennsylvania, Maryland, and Virginia, lately transmitted by the general to his lordship.

In this speech these nations observe, that since the sale of the lands to the king on the Ohio,—"Great numbers more of *your* people have come over the great mountains and settled throughout this country, and we are sorry to tell you, that several quarrels have happened between your people and ours, in which people have been killed on *both* sides, and that we now see the nations round us and your people *ready to imbroil in a quarrel*, which gives our nations great concern, as we, on our parts, want to live in friendship with you. As you have always told us, you have laws to govern your people by,—but we do not see that you have; therefore, brethren, unless you can fall upon some method of governing your people, who live between the great mountains and the Ohio river, and who are very numerous, it will be out of the Indian's power *to govern* their young men; for we assure you, the black clouds begin to gather fast in this country, and if *something* is not soon done, these clouds will deprive us of seeing the sun. We desire you to give the greatest attention to what we now tell you; as it comes from our hearts, and a desire we have to live in peace and friendship with our brethren the English, and therefore it grieves us to see some of the nations about us and your people ready to *strike each other*. We find your people are very fond of our rich land;—We see them quarrelling with each other every day about land, and burning one another's houses, so that we do not know how soon they may come *over* the river Ohio, and drive us from our villages; nor do we see you, brothers, take any care to stop them."

This speech, from tribes of such great influence and weight upon the Ohio, conveys much useful information.—It establishes the fact, of the settlers over the mountains being *very numerous*;—it shows the entire approbation of the Indians, in respect to a colony being established on the Ohio;—it pathetically complains of the king's subjects not being governed;—and it confirms the assertion mentioned by the lords commissioners for trade and plantations in the eighth paragraph of their report, "that if the settlers are suffered to continue in the lawless state of anarchy and confusion, they will commit such abuses as cannot fail of involving us in quarrels and disputes with the Indians, and thereby endanger the security of his majesty's colonies."

The lords commissioners for trade and plantations, however, pay no regard to all these circumstances, but content themselves with observing, "We see nothing to hinder the government of Virginia from extending the laws and constitution of that colony to such persons as may have already settled there under *legal titles*." To this we repeat, that there are *no such* persons, as have settled under legal titles, and even admitting there were, as their lordships say in the tenth paragraph, "it appears to them, there are some possessions derived from grants made by the governor and council of Virginia," and allowing that the laws and constitution of Virginia *did*, as they unquestionably *do not*,—extend to this territory, have the lords commissioners proposed any expedient for governing those many thousand families, who have not settled

* The parliamentary grants for the civil establishment of the provinces of Nova Scotia, Georgia, and East and West Florida, amount to *one million twelve thousand eight hundred and thirty-one pounds two shillings and eight pence halfpenny*, as the following account shows;—and notwithstanding this vast expense, the king has not received any quit-rents from these provinces. How different is the present proposition, for the establishment of the Ohio colony?—In this case, the crown is to be paid for the lands, (and which is the first instance of *any* being sold in North America.) Government is to be exempted from the *expense* of supporting the colony, and the king will receive his quit-rents, *neat and clear* of all deductions, (which deductions in the old colonies are at least twenty per centum) as will more particularly appear by a state of the king's quit-rents annexed hereto.

The parliamentary grants abovementioned are as follow:

To Nova Scotia	£707,390	19 7¾d.
To Georgia	234,610	3 1¼
To East Florida	45,400	
To West Florida	45,400	

under legal titles, but only agreeably to the ancient usage of location? Certainly not. But, on the contrary, their lordships have recommended, that his majesty should be advised to take every method to check the progress of their settlements;—and thereby leave them in their present lawless situation, at the risk of involving the middle colonies in a war with the natives, pregnant with a loss of subjects, loss of commerce, and depopulation of their frontier counties.

Having made these observations, it may next be proper to consider how the laws and constitution of Virginia can possibly be extended, so as effectually to operate on the territory in question? Is not Williamsburg, the capital of Virginia, at least four hundred miles from the settlements on the Ohio? Do not the laws of Virginia require, that all persons guilty of capital crimes shall be tried only in Williamsburg? Is not the general assembly held there? Is not the court of king's bench, or the superior court of the dominion, kept there? Has Virginia provided any fund for the support of the officers of these distant settlements, or for the transporting offenders, and paying the expense of witnesses travelling eight hundred miles (viz. going and returning,) and during their stay at Williamsburg? And will not these settlers be exactly (for the reasons assigned) in the situation described by governor Wright, in the very letter which the commissioners for trade and plantations have so warmly recommended, viz. "such persons as are settled at the back of the provinces, being at a *distance* from the seat of government, courts, magistrates, &c., they will be out of the reach and control of law and government, and their settlement will become a receptacle, and a kind of asylum for offenders!"

On the 11th paragraph we apprehend it is not necessary to say much. The reservatory clause proposed in our memorial is what is usual in royal grants; and in the present case, the lords of the committee of the privy council, we hope, will be of opinion, it is quite sufficient, more especially as we are able to prove to their lordships, that there are no "possessions," within the boundaries of the lands under consideration, which are held 'under legal titles."

To conclude: as it has been demonstrated, that neither royal nor provincial proclamations, nor the dread and horrors of a savage war, were sufficient (even before the country was purchased from the Indians) to prevent the settlement of the lands over the mountains, can it be conceived, that, now the country is purchased, and the people have seen the proprietors of Pennsylvania, who are the hereditary supporters of British policy in their own province, give every degree of encouragement to settle the lands westward of the mountains, the legislature of the province, at the same time, effectually corroborate the measure, and several thousand families, in consequence thereof, settle in the *new county* of Bedford,—that the inhabitants of the middle colonies will be restrained from cultivating the luxuriant country of the Ohio, joining to the southern line of Pennsylvania? But, even admitting that it might formerly have been a question of some propriety, whether the country should be permitted to be settled,—that cannot surely become a subject of inquiry now, when it is an obvious and certain truth, that at least thirty thousand British subjects are already settled there. Is it fit to leave such a body of people lawless and ungoverned? will sound policy recommend this manner of colonizing and increasing the wealth, strength, and commerce of the empire? or will it point out, that it is the indispensable duty of government to render *bad subjects useful subjects;* and for that purpose immediately to establish law and subordination among them, and thereby early confirm their native attachment to the laws, traffic, and customs of this kingdom?

On the whole, we presume that we have both by facts and sound argument, shown, that the opinion of the lords commissioners for trade and plantations on the object in question, is not well-founded, and that, if their lordships' opinion should be adopted, it would be attended with the most mischievous and dangerous consequences to the commerce, peace, and safety of his majesty's colonies in America:

We therefore hope, the expediency and utility of erecting the lands agreed for into a separate colony, without delay, will be considered as a measure of the soundest policy, highly conducive to the peace and security of the old colonies, to the preservation of the *boundary-line*, and to the commercial interests of the mother-country.

APPENDIX, No. I.

BY THE KING.

A PROCLAMATION.

GEORGE R.

WHEREAS we have taken into our royal consideration, the extensive and valuable acquisitions in America, secured to our crown by the late definitive treaty of peace, concluded at Paris the tenth of February last; and being desirous, that all our loving subjects, as well of our kingdoms as of our colonies in America, may avail themselves, with all convenient speed, of the great benefits and advantages which must accrue therefrom to their commerce, manufactures, and navigation; we have thought fit, with the advice of our privy council, to issue this our royal proclamation, hereby to publish and declare to all our loving subjects, that we have, with the advice of our said privy council, granted our letters patent under our great seal of Great Britain, to erect within the countries and islands, ceded and confirmed to us by the said treaty, four distinct and separate governments, styled and called by the names of Quebec, East Florida, West Florida, and Grenada, and limited and bounded as follows, viz.

First, The government of Quebec, bounded on the Labrador coast by the river St. John, and from thence by a line drawn from the head of that river, through the lake St. John, to the south end of the lake Nipissim; from whence the said line, crossing the river St. Lawrence and the lake Champlain in forty-five degrees of north latitude passes along the high lands, which divide the rivers that empty themselves into the said river St. Lawrence, from those which fall into the sea; and also along the north coast of the Baye des Chaleurs, and the coast of the gulf of St. Lawrence to cape Rosieres, and from thence crossing the mouth of the river St. Lawrence by the west end of the island of Anticosti, terminates at the aforesaid river St. John.

Secondly, The government of East Florida, bounded to the westward by the gulf of Mexico and the Appalachicola river; to the northward, by a line drawn from that part of the said river where the Catahouchee and Flint rivers meet, to the source of St. Mary's river, and by the course of the said river to the Atlantic Ocean; and to the east and south by the Atlantic Ocean, and the gulf of Florida, including all islands within six leagues of the sea-coast.

Thirdly, The government of West Florida, bounded to the southward by the gulf of Mexico, including all islands within six leagues of the coast from the river Appalachicola to lake Pontchartrain; to the westward by the said lake, the lake Maurepas, and the river Mississippi; to the northward, by a line drawn due east from that part of the Mississippi which lies in thirty-one degrees north latitude, to the river Appalachicola, or Catahouchee; and to the eastward by the said river.

Fourthly, The government of Grenada, comprehending the island of that name, together with the Grenadines, and the islands of Dominico, St. Vincent, and Tobago.

And to the end that the open and free fishery of our subjects may be extended to, and carried on upon the coast of Labrador and the adjacent islands, we have thought fit, with the advice of our said privy council, to put all that coast, from the river St. John's to Hudson's Streights, together with the islands of Anticosti and Madelaine, and all other smaller islands laying upon the said coast, under the care and inspection of our governor of Newfoundland.

We have also, with the advice of our privy council, thought fit to annex the islands of St. John and Cape Breton, or Isle Royale, with the lesser islands adjacent thereto, to our government of Nova Scotia.

We have also, with the advice of our privy council aforesaid, annexed to our province of Georgia, all the lands lying between the rivers Altamaha and St. Mary's.

And whereas it will greatly contribute to the speedy settling our said new governments, that our loving subjects should be informed of our paternal care for the security of the liberties and properties of those who are, and shall become inhabitants thereof; we have thought fit to publish and declare, by this our proclamation, that we have, in the letters patent under our great seal of Great Britain, by which the governments are constituted, given express power and direction to our governors of our said colonies respectively, that so soon as the state and circumstances of the said colonies will admit thereof, they shall, with the advice and consent of the members of our council, summon and call general assemblies within the said governments respectively, in such manner and form as is used, and directed in those colonies and provinces in America, which are under our immediate government; and we have also given power to the said governors, with the consent of our said councils, and the representatives of the people, so to be summoned as aforesaid, to make, constitute, and ordain laws, statutes, and ordinances for the public peace, welfare, and good government of our said colonies, and of the people and inhabitants thereof, as near as may be, agreeably to the laws of England, and under such regulations and restrictions as are used in other colonies; and in the mean time, and until such assemblies can be called as aforesaid, all persons inhabiting in, or resorting to our said colonies, may confide in our royal protection for the enjoyment of the benefit of the laws of our realm of England: for which purpose we have given power under our great seal to the governors of our said colonies respectively, to erect and constitute, with the advice of our said councils respectively, courts of judicature and public justice within our said colonies, for the hearing and determining all causes, as well criminal as civil, according to law and equity, and as near as may be, agreeably to the laws of England; with liberty to all persons who may think themselves aggrieved by the sentence of such courts, in all civil cases, to appeal, under the usual limitations and restrictions, to us, in our privy council.

We have also thought fit, with the advice of our privy council as aforesaid, to give unto the governors and councils of our said three new colonies upon the continent, full power and authority to settle and agree with the inhabitants of our

said new colonies, or to any other person who shall resort thereto, for such lands, tenements, and hereditaments, as are now, or hereafter shall be, in our power to dispose of, and them to grant to any such person or persons, upon such terms, and under such moderate quit-rents, services, and acknowledgments, as have been appointed and settled in other colonies, and under such other conditions as shall appear to us to be necessary and expedient for the advantage of the grantees, and the improvement and settlement of our said colonies.

And whereas we are desirous, upon all occasions, to testify our royal sense and approbation of the conduct and bravery of the officers and soldiers of our armies, and to reward the same, we do hereby command and impower our governors of our said three new colonies, and other our governors of our several provinces on the continent of North America, to grant, without fee or reward, to such reduced officers as have served in North America during the late war, and are actually residing there, and shall personally apply for the same, the following quantities of land, subject, at the expiration of ten years, to the same quit-rents as other lands are subject to in the province within which they are granted, as also subject to the same conditions of cultivation and improvement, viz.

To every person having the rank of a field-officer, five thousand acres.

To every captain, three thousand acres.

To every subaltern or staff-officer, two thousand acres.

To every non-commissioned officer, two hundred acres.

To every private man fifty acres.

We do likewise authorize and require the governors and commanders-in-chief of all our said colonies upon the continent of North America to grant the like quantities of land, and upon the same conditions, to such reduced officers of our navy of like rank, as served on board our ships of war in North America at the times of the reduction of Louisbourg and Quebec in the late war, and who shall personally apply to our respective governors for such grants.

And whereas it is just and reasonable, and essential to our interest, and security of our colonies, that the several nations or tribes of Indians, with whom we are connected, and who live under our protection, should not be molested or disturbed in the possession of such parts of our dominions and territories as, not having been ceded to, or purchased by us, are reserved to them, or any of them, as their hunting grounds; we do therefore, with the advice of our privy council, declare it to be our royal will and pleasure, that no governor, or commander-in-chief, in any of our colonies of Quebec, East Florida, or West Florida, do presume, upon any pretence whatever, to grant warrants of survey, or pass any patents for lands beyond the bounds of their respective governments, as described in their commissions; as also that no governor or commander-in-chief of our other colonies or plantations in America, do presume for the present, and until our further pleasure be known, to grant warrant of survey, or pass patents for any lands *beyond* the heads or sources of any of the rivers which fall into the Atlantic Ocean from the west or north-west; or upon any lands whatever which not having been ceded to or purchased by us, as aforesaid, are reserved to the said Indians, or any of them.

And do we further declare it to be our royal will and pleasure, *for the present*, as aforesaid, to reserve under our sovereignty, protection, and dominion, for the *use* of the said Indians, all the land and territories *not* included within the limits of our said three new governments, or within the limits of the territory granted to the Hudson's Bay company; as also, all the land and territories lying to the westward of the sources of the rivers which fall into the sea from the west and north-west as aforesaid; and we do hereby strictly forbid, on pain of our displeasure, all our loving subjects from making any purchases or settlements whatever, or taking possession of any of the lands above reserved, without our special leave and license for that purpose first obtained.

And we do further strictly enjoin and require all persons whatever, who have either wilfully or inadvertently seated themselves upon any lands, within the countries above described, or upon any other lands, *which not having been ceded to, or purchased by us*, are still reserved to the said Indians as aforesaid, forthwith to remove themselves from such settlements.

And whereas great frauds and abuses have been committed in the purchasing lands of the Indians, to the great prejudice of our interests, and to the great dissatisfaction of the said Indians; in order therefore to prevent such irregularities for the future, and to the end that the Indians may be convinced of our justice, and determined resolution to remove all reasonable cause of discontent, we do, with the advice of our privy council, strictly enjoin and require, that no private person do presume to make any purchase from the said Indians, of any lands reserved to the said Indians within those parts of our colonies where we have thought proper to allow settlement; but that if at any time any of the said Indians should be inclined to dispose of the said lands, the same shall be purchased only for us, in our name, at some public meeting or assembly of the said Indians, to be held for that purpose by the governor or commander-in-chief of our colony respectively within which they shall lie: and in case they shall lie within the limits of any proprietaries, conformable to such directions and instructions as we or they shall think proper to give for that purpose: and we do, by the advice of our privy council, declare and enjoin, that the trade with the said Indians shall be free and open to all our subjects whatever, provided that every person who may incline to trade with the said Indians, do take out a license for carrying on such trade, from the governor or commander-in-chief of any of our colonies respectively, where such person shall reside, and also the security to observe such regulations as we shall at any time think fit, by ourselves or commissaries, to be appointed for this purpose, to direct and appoint for the benefit of the said trade: and we do hereby authorize, enjoin, and require the governors and commanders-in-chief of all our colonies respectively, as well those under our immediate government, as those under the government and direction of proprietaries, to grant such licenses without fee or reward, taking especial care to insert therein a condition that such license shall be void, and the security forfeited, in case the person to whom the same is granted, shall refuse or neglect to observe such regulations as we shall think proper to prescribe as aforesaid.

And we do further expressly enjoin and require all officers whatever, as well military as those em-

ployed in the management and direction of Indian affairs within the territories reserved, as aforesaid, for the use of the said Indians, to seize and apprehend all persons whatever, who standing charged with treasons, misprisions of treasons, murders, or other felonies or misdemeanours, shall fly from justice and take refuge in the said territory, and to send them under a proper guard to the colony where their crime was committed of which they shall stand accused, in order to take their trial for the same.

Given at our court at St. James's, the 7th day of October, 1763, in the third year of our reign.——God save the king.

APPENDIX No. II.

STATE OF THE KING'S QUIT-RENTS IN NORTH AMERICA.

	Consideration money paid to the king for the lands.	The time the lands are exempted from quit-rent.	Quit-rents received.	Expense to this country for the support of the civil government of the colonies.
Island of St. John	None	20 years.	None	
Nova Scotia	None	10 years.	And yet no quit-rents have been received, though the colony was established twenty-two years ago.	707,320*l* 19*s* 7½*d*
Canada	None			
Massachusetts Connecticut Rhode Island	None	Wholly exempt from quit-rents and all payments to the crown.	None	None
New Hampshire	None		None	None
New York	None	This colony was restored to the crown in the year 1693-4, and yet from that time very little quit-rents have been received.	None	None
New Jersey Pennsylvania Maryland	None	Wholly exempt from quit-rents and all payments to the crown.		None
Virginia	None	This colony was reassumed by the crown in the year 1626; and yet for a great number of years, the quit-rents were not paid at all:—never with any regularity till within a very few years; and now from what is paid there is a deduction of at least 20 per cent.	None	
N. & S. Carolina	None			
Georgia	None	This colony was settled in the year 1735, and yet no quit-rents have been received.	None	214,610*l* 3*s* 1½*d*
E. & W. Florida	None	10 years.	None	90,900*l* 0 0
☞ But it is proposed to pay for the colony on the Ohio	10,460*l* 7*s* 3*d*; which is *all* the money the *whole* country (of which this is only a small part) cost government for the cession from the Six Nations.	The quit-rents to commence in twenty years from the time of the survey of each lot or plantation, and to be paid into the hands of such person as his majesty shall appoint to receive the same, *nett and clear* of all deductions whatsoever, for collection or otherwise.		*All* the expenses of the civil government of this colony, to be borne and paid by the proprietors.

Note on the Report.

The preceding proposition, report, and answer are very intimately connected with the history of the revolution of America. The answer to the report, as coming from the pen of Dr. Franklin, is entitled to great attention. He bestowed great pains to render it clear, close, and conclusive in its reasonings; it is indeed a triumphant argument. The variety, extent, and exactness of the information which it contains; and the foresight which discerned at so early a period the settlement, cultivation, and riches of that country; and even the building and sailing of ships on the Ohio, and thence to the ocean, render these tracts highly interesting. When the answer was called up in the privy council on the 1st of July, 1772, it was heard with attention mixed with surprise; it seemed to reveal a new world; and such was the impression which it made, that the prayer of the petitioners was approved.

But the first effect of its approval was very single. The report of the board of trade was drawn up by the president lord Hillsborough, who immediately upon the decision of the privy council, resigned his place. This minister had formed a plan of limitation for the colonies, resembling that of the French when they possessed Canada, which was to circumscribe all settlements by a line to coincide with some northern position and the Mississippi. The answer of Dr. Franklin must have rendered his lordship's want of knowledge of the geographical, physical, and historical circumstances of the American interior, very striking; and his conduct on former occasions, compared with the present, so irreconcilable with an honest or a sound judgment, that his pride appears to have rendered it necessary that he should retire.

Dr. Franklin's answer had been put to press, with a view to immediate publication, but on hearing that lord Hillsborough had resigned, the publication was stopt, when only five copies had been issued. The copy here published from is that which Dr. Franklin himself retained.

Comparison of Great Britain and America as to Credit, in 1777.*

In borrowing money a man's credit depends on some or all of the following particulars.

First, His known conduct respecting former loans, and his punctuality in discharging them.

Secondly, His industry.

Thirdly, His frugality.

Fourthly, The amount and the certainty of his income, and the freedom of his estate from the incumbrances of prior debts.

Fifthly, His well founded prospects of greater future ability, by the improvement of his estate in value, and by aids from others.

Sixthly, His known prudence in managing his general affairs, and the advantage they will probably receive from the loan which he desires.

Seventhly, His known probity and honest character, manifested by his voluntary discharge of debts, which he could not have been legally compelled to pay. The circumstances which give credit to an *individual* ought to have, and will have, their weight upon the lenders of money to *public bodies* or nations. If then we consider and compare Britain and America, in these several particulars, upon the question, "To which is it safest to lend money?" We shall find,

1. Respecting *former loans*, that America, which borrowed ten millions during the last war, for the maintenance of her army of 25,000 men and other charges, had faithfully discharged and paid that debt, and all her other debts, in 1772. Whereas Britain, during those ten years of peace and profitable commerce, had made little or no reduction of her debt; but on the contrary, from time to time, diminished the hopes of her creditors, by a wanton diversion and misapplication of the sinking fund destined for discharging it.

2. Respecting *industry;* every man in America is employed; the greater part in cultivating their own lands, the rest in handicrafts, navigation, and commerce. An idle man there is a rarity, idleness and inutility are disgraceful. In England the number of that character is immense, fashion has spread it far and wide; hence the embarrassments of private fortunes, and the daily bankruptcies arising from an universal fondness for appearance and expensive pleasures; and hence, in some degree, the mismanagement of public business; for habits of business, and ability in it, are acquired only by practice; and where universal dissipation, and the perpetual pursuit of amusement are the mode, the youth, educated in it, can rarely afterwards acquire that patient attention and close application to affairs, which are so necessary to a statesman charged with the care of national welfare. *Hence* their frequent errors in policy, and hence the weariness at public councils, and backwardness in going to them, the constant unwillingness to engage in any measures that require thought and consideration, and the readiness for postponing every new proposition; which postponing is therefore the only part of business they come to be expert in, an expertness produced necessarily by so much daily practice. Whereas in America, men bred to close employment in their private affairs, attend with ease to those of the public, when engaged in them, and nothing fails through negligence.

* This paper was written, translated, printed, and circulated, while Dr. Franklin was at the court of France, for the purpose of inducing foreigners to lend money to America in preference to Great Britain.

3. Respecting *frugality:* the manner of living in America is more simple and less expensive than that in England: plain tables, plain clothing, and plain furniture in houses prevail, with few carriages of pleasure; there, an expensive appearance hurts credit, and is avoided: in England, it is often assumed to gain credit, and continued to ruin. Respecting *public* affairs, the difference is still greater. In England, the salaries of officers, and emoluments of office are enormous. The king has a million sterling per annum, and yet cannot maintain his family free of debt: secretaries of state, lords of treasury, admiralty, &c. have vast appointments: an auditor of the exchequer has sixpence in the pound, or a fortieth part of all the public money expended by the nation; so that when a war costs forty millions, one million is paid to him: an inspector of the mint, in the last new coinage, received as his fee 65,000*l.* sterling per annum; to all which rewards no service these gentlemen can render the public is by any means equivalent. All this is paid by the people, who are oppressed by taxes so occasioned, and thereby rendered less able to contribute to the payment of necessary national debts. In America, salaries, where indispensable, are extremely low; but much of the public business is done gratis. The honour of serving the public ably and faithfully is deemed sufficient. *Public spirit* really exists there, and has great effects. In England it is universally deemed a nonentity, and whoever pretends to it is laughed at as a fool, or suspected as a knave. The committees of congress which form the board of war, the board of treasury, the board of foreign affairs, the naval board, that for accounts, &c. all attend the business of their respective functions, without any salary or emolument whatever, though they spend in it much more of their time than any lord of treasury or admiralty in England can spare from his amusements. A British minister lately computed, that the whole expense of the Americans, in their *civil* government over three millions of people amounted to but 70,000*l.* sterling, and drew from thence a conclusion, that they ought to be taxed, until their expense was equal in proportion to that which it costs Britain to govern eight millions. He had no idea of a contrary conclusion, that if three millions may be well governed for 70,000*l.* eight millions may be as well governed for three times that sum, and that therefore the expense of his own government should be diminished. In that corrupted nation no man is ashamed of being concerned in lucrative *government jobs*, in which the public money is egregiously misapplied and squandered, the treasury pillaged, and more numerous and heavy taxes accumulated, to the great oppression of the people. But the prospect of a greater number of such jobs by a war is an inducement with many, to cry out for war upon all occasions, and to oppose every proposition of peace. Hence the constant increase of the national debt, and the absolute improbability of its ever being discharged.

4. Respecting the *amount and certainty of income, and solidity of security;* the *whole* thirteen states of America are engaged for the payment of every debt contracted by the congress, and the debt to be contracted by the present war is the *only* debt they will have to pay; all, or nearly all, the former debts of particular colonies being already discharged. Whereas England will have to pay not only the enormous debt this war must occasion, but all their vast preceding debt, or the interest of it,—and while America is enriching itself by prizes made upon the British commerce, more than ever it did by any commerce of its own, under the restraints of a British monopoly, and the diminution of its revenues, and of course less able to discharge the present indiscreet increase of its expenses.

5. Respecting prospects of greater future ability, Britain has none such. Her islands are circumscribed by the ocean; and excepting a few parks or forests, she has no new land to cultivate, and cannot therefore extend improvements. Her numbers too, instead of increasing from increased subsistence, are continually diminishing from growing luxury, and the increasing difficulties of maintaining families, which of course discourage early marriages. Thus she will have fewer people to assist in paying her debts, and that diminishing number will be poorer. America, on the contrary, has, besides her lands already cultivated, a vast territory yet to be cultivated; which, being cultivated continually increases in value with the increase of people; and the people, who double themselves by a *natural propagation* every twenty-five years, will double yet faster, by the accession of *strangers*, as long as lands are to be had for new families; so that every twenty years there will be a double number of inhabitants obliged to discharge the public debts; and those inhabitants, being more opulent, may pay their shares with greater ease.

6. Respecting *prudence* in general affairs, and the advantages to be expected from the loan desired; the Americans are cultivators of land; those engaged in fishery and commerce are few, compared with the others. They have ever conducted their several governments with wisdom, avoiding wars, and vain expensive projects, delighting only in their peaceable occupations, which must, considering the extent of their uncultivated territory, find them employment still for ages. Whereas England, ever unquiet, ambitious, avaricious, imprudent, and quarrelsome, is half of the time engaged in war, always at an expense infinitely greater than the advantages

to be obtained by it, if successful. Thus they made war against Spain in 1739, for a claim of about 95,000*l.* (scarce a groat for each individual of the nation) and spent forty millions sterling in the war, and the lives of fifty thousand men; and finally made peace without obtaining satisfaction for the sum claimed. Indeed, there is scarce a nation in Europe, against which she has not made war on some frivolous pretext or other, and thereby imprudently accumulated a debt, that has brought her on the verge of bankruptcy. But the most indiscreet of all her wars, is the present against America, with whom she might, for ages, have preserved her profitable connexion only by a just and equitable conduct. She is now acting like a mad shop-keeper, who, by beating those that pass his doors, attempts to make them come in and be his customers. America cannot submit to such treatment, without being first ruined, and, being ruined, her custom will be worth nothing. England, to effect this, is increasing her debt, and irretrievably ruining herself. America, on the other hand, aims only to establish her liberty, and that freedom of commerce which will be advantageous to all Europe; and by abolishing that monopoly which she laboured under she will profit infinitely more than enough to repay any debt which she may contract to accomplish it.

7. Respecting *character in the honest payment of debts*; the punctuality with which America has discharged her public debts was shown under the first head. And the general good disposition of the people to such punctuality has been manifested in their faithful payment of *private* debts to England, since the commencement of this war. There were not wanting some politicians [in America,] who proposed *stopping that payment*, until peace should be restored, alleging, that in the usual course of commerce, and of the credit given, there was always a debt existing equal to the trade of eighteen months: that the trade amounting to five millions sterling per annum, the debt must be seven millions and a half; that this sum paid to the British merchants would operate to prevent that distress, intended to be brought upon Britain, by our stoppage of commerce with her; for the merchants receiving this money, and no orders with it for farther supplies, would either lay it out in public funds, or in employing manufacturers to accumulate goods for a future hungry market in America upon an expected accommodation, by which means the funds would be kept up and the manufacturers prevented from murmuring. But *against this it was alleged*, that injuries from ministers should not be revenged on merchants; that the credit was in consequence of private contracts, made in confidence of good faith; that these ought to be held sacred, and faithfully complied with; for that, whatever public utility might be supposed to arise from a breach of private faith, it was unjust, and would in the end be found unwise—honesty being in truth the best policy. On this principle the proposition was universally rejected; and though the English prosecuted the war with unexampled barbarity, burning our defenceless towns in the midst of winter, and arming savages against us; the debt was punctually paid; and the merchants of London have testified to the parliament, and will testify to all the world, that from their experience in dealing with us they had, before the war, no apprehension of our unfairness: and that since the war they have been convinced, that their good opinion of us was well founded. England, on the contrary, an old, corrupt government, extravagant, and profligate nation, sees herself deep in debt, which she is in no condition to pay; and yet is madly, and dishonestly running deeper, without any possibility of discharging her debt, but by a public bankruptcy.

It appears, therefore, from the general industry, frugality, ability, prudence, and virtue of America, that she is a much safer debtor than Britain;—to say nothing of the satisfaction generous minds must have in reflecting, that by loans to America they are opposing tyranny, and aiding the cause of liberty, which is the cause of all mankind.

PHILOSOPHICAL.

ESSAYS AND CORRESPONDENCE.

ELECTRICITY.

To Peter Collinson, Esq. F. R. S. London.

PHILADELPHIA, March 28, 1747.

YOUR kind present of an electric tube, with directions for using it, has put several of us* on making electrical experiments, in which we have observed some particular phenomena that we look upon to be new. I shall therefore communicate them to you in my next, though possibly they may not be new to you, as among the numbers daily employed in those experiments on your side the water, it is probable some one or other has hit on the same observations. For my own part, I never was before engaged in any study that so totally engrossed my attention and my time as this has lately done; for what with making experiments when I can be alone, and repeating them to my friends and acquaintance, who, from the novelty of the thing, come continually in crowds to see them, I have, during some months past, had little leisure for any thing else.—I am, &c.

B. FRANKLIN.

To the same.

Wonderful effect of points.—Positive and negative Electricity.—Electrical Kiss.—Counterfeit Spider.—Simple and commodious electrical Machine.

PHILADELPHIA, July 11, 1747.

IN my last I informed you that, in pursuing our electrical inquiries, we had observed some particular phenomena, which we looked upon to be new, and of which I promised to give you some account, though I apprehended they might not possibly be new to you, as so many hands are daily employed in electrical experiments on your side the water, some or other of which would probably hit on the same observations.

The first is the wonderful effect of pointed bodies, both in *drawing off* and *throwing off* the electrical fire. For example.

Place an iron shot of three or four inches diameter on the mouth of a clean dry glass bottle. By a fine silken thread from the ceiling, right over the mouth of the bottle, suspend a small cork-ball, about the bigness of a marble; the thread of such a length, as that the cork-ball may rest against the side of the shot. Electrify the shot, and the ball will be repelled to the distance of four or five inches, more or less, according to the quantity of electricity.—When in this state, if you present to the shot the point of a long, slender, sharp bodkin, at six or eight inches distance, the repellency is instantly destroyed, and the cork flies to the shot. A blunt body must be brought within an inch, and draw a spark to produce the same effect. To prove that the electrical fire is *drawn off* by the point, if you take the blade of the bodkin out of the wooden handle, and fix it in a stick of sealing-wax, and then present it at the distance aforesaid, or if you bring it very near, no such effect follows; but sliding one finger along the wax till you touch the blade, and the ball flies to the shot immediately.—If you present the point in the dark, you will see, sometimes at a foot distance and more, a light gather upon it, like that of a fire-fly, or glow worm; the less sharp the point, the nearer you must bring it to observe the light; and at whatever distance you see the light, you may draw off the electrical fire, and destroy the repellency.—If a cork ball so suspended be repelled by the tube, and a point be presented quick to it, though at a considerable distance, it is surprising to see how suddenly it flies back to the tube. Points of wood will do near as well as those of iron, provided the wood is not dry; for perfectly dry wood will no more conduct electricity than sealing wax.

To show that points will *throw off** as well

* The *Library Company*, an institution of the author's, founded in 1730. To which company the present was made.

* This power of points to *throw off* the electrical fire, was first communicated to me by my ingenious friend Mr. Thomas Hopkinson, since deceased, whose virtues and integrity, in every situation of life, public and private, will ever make his memory dear to those who knew him, and knew how to value him.

as *draw off* the electrical fire; lay a long sharp needle upon the shot, and you cannot electrise the shot so as to make it repel the cork-ball.—Or fix a needle to the end of a suspended gun-barrel, or iron-rod, so as to point beyond it like a little bayonet;* and while it remains there, the gun-barrel, or rod, cannot by applying the tube to the other end be electrised so as to give a spark, the fire continually running out silently at the point. In the dark you may see it make the same appearence as it does in the case before-mentioned.

The repellency between the cork-ball and the shot is likewise destroyed. 1. By sifting fine sand on it; this does it gradually. 2. By breathing on it. 3. By making a smoke about it from burning wood.† 4. By candle-light, even though the candle is at a foot distance: these do it suddenly.—The light of a bright coal from a wood fire, and the light of a red hot iron do it likewise; but not at so great a distance. Smoke from dry rosin dropt on hot iron, does not destroy the repellency; but is attracted by both shot and cork ball, forming proportionable atmospheres round them, making them look beautifully, somewhat like some of the figures in Burnet's or Whiston's Theory of the Earth.

N. B. This experiment should be made in a closet, where the air is very still, or it will be apt to fail.

The light of the sun thrown strongly on both cork and shot by a looking-glass for a long time together, does not impair the repellency in the least. This difference between fire-light and sun-light is another thing that seems new and extraordinary to us.‡

We had for some time been of opinion, that the electrical fire was not created by friction, but collected, being really an element diffused among, and attracted by other matter, particularly by water and metals. We had even discovered and demonstrated its afflux to the electrical sphere, as well as its efflux, by means of little light windmill wheels made of stiff paper vanes, fixed obliquely, and turning freely on fine wire axles. Also by little wheels of the same matter, but formed like water-wheels. Of the disposition and application of which wheels, and the various phenomena resulting, I could, if I had time, fill you a sheet.* The impossibility of electrising one's self (though standing on wax) by rubbing the tube, and drawing the fire from it; and the manner of doing it, by passing the tube near a person or thing standing on the floor, &c. had also occurred to us some months before Mr. Watson's ingenious *Sequel* came to hand, and these were some of the new things I intended to have communicated to you.—But now I need only mention some particulars not hinted in that piece, with our reasonings thereupon: though perhaps the latter might well enough be spared.

1. A person standing on wax, and rubbing the tube, and another person on wax drawing the fire, they will both of them (provided they do not stand so as to touch one another) appear to be electrised, to a person standing on the floor; that is, he will perceive a spark on approaching each of them with his knuckle.

2. But if the persons on wax touch one another during the exciting of the tube, neither of them will appear to be electrised.

3. If they touch one another after exciting the tube, and drawing the fire as aforesaid, there will be a stronger spark between them than was between either of them and the person on the floor.

4. After such strong spark, neither of them discover any electricity.

These appearances we attempt to account for thus: we suppose, as aforesaid, that electrical fire is a common element, of which every one of the three persons abovementioned has his equal share, before any operation is begun with the tube. *A*, who stands on wax, and rubs the tube, collects the electrical fire from himself into the glass; and his communication with the common stock being cut off by the wax, his body is not again immediately supplied. *B*, (who stands on wax likewise) passing his knuckle along near the tube, receives the fire which was collected by the glass from *A*; and his communication with the common stock being likewise cut off, he retains the additional quantity received.—To *C*, standing on the floor, both appear to be electrised: for he having only the middle quantity of electrical fire, receives a spark upon approaching *B*, who has an over quantity; but gives one to *A*, who has an under quantity. If *A* and *B* approach to touch each other, the spark is stronger, because the difference between them is greater; after

* This was Mr. Hopkinson's experiment, made with an expectation of drawing a more sharp and powerful spark from the point, as from a kind of focus, and he was surprised to find little or none.

† We suppose every particle of sand, moisture, or smoke, being first attracted and then repelled, carries off with it a portion of the electrical fire; but that the same still subsists in those particles, till they communicate it to something else, and that it is never really destroyed. So when water is thrown on common fire, we do not imagine that the element is thereby destroyed or annihilated, but only dispersed, each particle of water carrying off in vapour its portion of the fire, which it had attracted and attached to itself.

‡ This different effect probably did not arise from any difference in the light, but rather from the particles separated from the candle, being first attracted and then repelled, carrying off the electric matter with them; and from the rarefying of the air, between the glowing coal or red hot iron, and the electrised shot, through which rarefied air the electric fluid could more readily pass.

* These experiments with the wheels, were made and communicated to me by my worthy and ingenious friend Mr Philip Syng; but we afterwards discovered that the motion of those wheels was not owing to any afflux or efflux of the electric fluid, but to various circumstances of attraction and repulsion. 1750.

such touch there is no spark between either of them and *C*, because the electrical fire in all is reduced to the original equality. If they touch while electrising, the equality is never destroyed, the fire only circulating. Hence have arisen some new terms among us; we say *B*, (and bodies like circumstanced) is electrised *positively*; *A*, *negatively*. Or rather, *B* is electrised *plus*; *A*, *minus*. And we daily in our experiments electrise bodies *plus* or *minus*, as we think proper.—To electrise *plus* or *minus*, no more needs to be known than this, that the parts of the tube or sphere that are rubbed, do, in the instant of the friction, attract the electrical fire, and therefore take it from the thing rubbing: the same parts immediately, as the friction upon them ceases, are disposed to give the fire they have received, to any body that has less. Thus you may circulate it, as Mr. Watson has shown; you may also accumulate or subtract it, upon, or from any body, as you connect that body with the rubber or with the receiver, the communication with the common stock being cut off. We think that ingenious gentleman was deceived when he imagined (in his *Sequel*) that the electrical fire came down the wire from the ceiling to the gun-barrel, thence to the sphere, and so electrised the machine and the man turning the wheel, &c. We suppose it was *driven off*, and not brought on through that wire; and that the machine and man, &c. were electrised *minus*; *i. e.* had less electrical fire in them than things in common.

As the vessel is just upon sailing, I cannot give you so large an account of American electricity as I intended: I shall only mention a few particulars more.—We find granulated lead better to fill the phial with, than water, being easily warmed, and keeping warm and dry in damp air.—We fire spirits with the wire of the phial.—We light candles just blown out, by drawing a spark among the smoke between the wire and snuffers.—We represent lightning, by passing the wire in the dark, over a china plate that has gilt flowers, or applying it to gilt frames of looking glasses, &c.—We electrise a person twenty or more times running, with a touch of the finger on the wire, thus: he stands on wax; give him the electrised bottle in his hand; touch the wire with your finger, and then touch his hand or face; there are sparks every time.*—We increase the force of the electrical kiss vastly, thus: let *A* and *B* stand on wax; or *A* on wax, and *B* on the floor; give one of them the electrised phial in hand; let the other take hold of the wire; there will be a small spark; but when their lips approach, they will be struck and shocked; the same if another gentleman and lady, *C* and *D*, standing also on wax, and joining hands with *A* and *B*, salute or shake hands. We suspend by find silk thread a counterfeit spider, made of a small piece of burnt cork, with legs of linen thread, and a grain or two of lead stuck in him, to give him more weight; upon the table, over which he hangs, we stick a wire upright, as high as the phial and wire, four or five inches from the spider; then we animate him, by setting the electrified phial at the same distance on the other side of him; he will immediately fly to the wire of the phial, bend his legs in touching it, then spring off, and fly to the wire on the table, thence again to the wire of the phial, playing with his legs against both, in a very entertaining manner, appearing perfectly alive to persons unacquainted: he will continue this motion an hour or more in dry weather. We electrify, upon wax in the dark, a book that has a double line of gold round upon the covers, and then apply a knuckle to the gilding; the fire appears every where upon the gold like a flash of lightning; not upon the leather, nor, if you touch the leather instead of the gold. We rub our tubes with buckskin, and observe always to keep the same side to the tube, and never to sully the tube by handling; thus they work readily and easily, without the least fatigue, especially if kept in tight pasteboard cases, lined with flannel, and sitting close to the tube.* This I mention, because the European papers on electricity frequently speak of rubbing the tube as a fatiguing exercise. Our spheres are fixed on iron axles, which pass through them. At one end of the axis there is a small handle, with which you turn the sphere like a common grindstone. This we find very commodious, as the machine takes up but little room, is portable, and may be inclosed in a tight box, when not in use. It is true, the sphere does not turn so swift as when the great wheel is used: but swiftness we think of little importance, since a few turns will charge the phial, &c. sufficiently.†

B. FRANKLIN.

* By taking a spark from the wire, the electricity within the bottle is diminished; the outside of the bottle then draws some from the person holding it, and leaves him in the negative state. Then when his hand or face is touched, an equal quantity is restored to him from the person touching.

* Our tubes are made here of green glass, 27 or 30 inches long, as big as can be grasped.

† This simple easily-made machine was a contrivance of Mr. Syng's.

To Peter Collinson, London.

Observations on the Leyden Bottle, with Experiments proving the different electrical State of its different Surfaces.

PHILADELPHIA, Sept. 1, 1747.

THE necessary trouble of copying long letters, which perhaps, when they come to your

hands, may contain nothing new, or worth your reading, (so quick is the progress made with you in electricity) half discourages me from writing any more on that subject. Yet I cannot forbear adding a few observations on M. Muschenbroek's wonderful bottle.

1. The non-electric contained in the bottle differs, when electrised, from a non-electric electrised out of the bottle, in this; that the electrical fire of the latter is accumulated *on its surface*, and forms an electrical atmosphere round it of considerable extent; but the electrical fire is crowded *into the substance* of the former, the glass confining it.*

2. At the same time that the wire and the top of the bottle, &c. is electrised *positively* or *plus*, the bottom of the bottle is electrised *negatively* or *minus*, in exact proportion; *i. e.* whatever quantity of electrical fire is thrown in at the top, an equal quantity goes out of the bottom.† To understand this, suppose the common quantity of electricity in each part of the bottle, before the operation begins, is equal to 20; and at every stroke of the tube, suppose a quantity equal to 1 is thrown in; then, after the first stroke the quantity contained in the wire and upper part of the bottle will be 21, in the bottom 19. After the second, the upper part will have 22, the lower 18, and so on, till, after 20 strokes, the upper part will have a quantity of electrical fire equal to 40, the lower part none: and then the operation ends: for no more can be thrown into the upper part, when no more can be driven out of the lower part. If you attempt to throw more in, it is spewed back through the wire, or flies out in loud cracks through the sides of the bottle.

3. The equilibrium cannot be restored in the bottle by *inward* communication or contact of the parts; but it must be done by a communication formed *without* the bottle, between the top and bottom, by some non-electric, touching or approaching both at the same time; in which case it is restored with a violence and quickness inexpressible; or, touching each alternately, in which case the equilibrium is restored by degrees.

4. As no more electrical fire can be thrown into the top of the bottle, when all is driven out of the bottom, so in a bottle not yet electrised, none can be thrown into the top, when none *can* get out at the bottom; which happens either when the bottom is too thick or when the bottle is placed on an electric *per se*. Again, when the bottle is electrised, but little of the electrical fire can be *drawn out* from the top, by touching the wire, unless an equal quantity can at the same time *get in* at the bottom.* Thus, place an electrised bottle on clean glass or dry wax, and you will not, by touching the wire, get out the fire from the top. Place it on a non-electric, and touch the wire, you will get it out in a short time; but soonest when you form a direct communication as above.

So wonderfully are these two states of electricity, the *plus* and *minus*, combined and balanced in this miraculous bottle! situated and related to each other in a manner that I can by no means comprehend! If it were possible that a bottle should in one part contain a quantity of air strongly comprest, and in another part a perfect vacuum, we know the equilibrium would be instantly restored *within*. But here we have a bottle containing at the same time a *plenum* of electrical fire, and a *vacuum* of the same fire; and yet the equilibrium cannot be restored between them but by a communication *without!* though the *plenum* presses violently to expand, and the hungry vacuum seems to attract as violently in order to be filled.

5. The shock to the nerves (or convulsion rather) is occasioned by the sudden passing of the fire through the body in its way from the top to the bottom of the bottle. The fire takes the shortest† course, as Mr. Watson justly observes: but it does not appear from experiment, that in order for a person to be shocked, a communication with the floor is necessary: for he that holds the bottle with one hand, and touches the wire with the other, will be shocked as much, though his shoes be dry, or even standing on wax, as otherwise. And on the touch of the wire, (or of the gun-barrel, which is the same thing) the fire does not proceed from the touching finger to the wire, as is supposed, but from the wire to the finger, and passes through the body to the other hand, and so into the bottom of the bottle.

Experiments confirming the above.

EXPERIMENT I.

Place an electrised phial on wax; a small cork-ball suspended by a dry silk thread held in your hand, and brought near to this wire will first be attracted, and then repelled: when in the state of repellency, sink your hand, that the ball may be brought towards the bottom of the bottle; it will be there instantly and strongly attracted, till it has parted with its fire.

If the bottle had a *positive* electrical atmosphere, as well as the wire, an electrified cork would be repelled from one as well as from the other.

* See this opinion rectified in sect. 16 and 17 of the next letter. The fire in the bottle was found by subsequent experiments not to be contained in the non-electric, but *in the glass*. 1748.

† What is said here, and after, of the *top* and *bottom* of the bottle, is true of the *inside* and *outside* surfaces, and should have been so expressed.

* See the preceding note, relating to *top* and *bottom*.

† Other circumstances being equal

EXPERIMENT II.

FIG. 1. From a bent wire (*a*) sticking in the table, let a small linen thread (*b*) hang down within half an inch of the electrised phial (*c*). Touch the wire or the phial repeatedly with your finger, and at every touch you will see the thread instantly attracted by the bottle. (This is best done by a vinegar cruet, or some such bellied-bottle.) As soon as you draw any fire out of the upper part, by touching the wire, the lower part of the bottle draws an equal quantity in by the thread.

EXPERIMENT III.

FIG. 2. Fix a wire in the lead, with which the bottom of the bottle is armed (*d*) so as that bending upwards, its ring-end may be level with the top or ring-end of the wire in the cork (*e*) and at three or four inches distance. Then electrise the bottle, and place it on wax. If a cork suspended by a silk thread (*f*) hang between these two wires, it will play incessantly from one to the other, till the bottle is no longer electrised; that is, it fetches and carries fire from the top to the bottom* of the bottle, till the equilibrium is restored.

EXPERIMENT IV.

FIG. 3. Place an electrised phial on wax; take a wire (*g*) in form of a *C*, the ends at such a distance when bent, as that the upper may touch the wire of the bottle, when the lower touches the bottom: stick the outer part on a stick of sealing-wax (*h*,) which will serve as a handle; then apply the lower end to the bottom of the bottle, and gradually bring the upper end near the wire in the cork. The consequence is, spark follows spark till the equilibrium is restored. Touch the top first, and on approaching the bottom with the other end, you have a constant stream of fire from the wire entering the bottle. Touch the top and bottom together, and the equilibrium will instantly be restored, the crooked wire forming the communication.

EXPERIMENT V.

FIG. 4. Let a ring of thin lead, or paper, surround a bottle (*i*) even at some distance from or above the bottom. From that ring let a wire proceed up, till it touch the wire of the cork (*k*). A bottle so fixed cannot by any means be electrised: the equilibrium is never destroyed: for while the communication between the upper and lower parts of the bottle is continued by the outside wire, the fire only circulates: what is driven out at bottom, is constantly supplied from the top.† Hence a bottle cannot be electrised that is foul or moist on the outside, if such moisture continue up to the cork or wire.

* i. e From the inside to the outside.

† See the preceding note, relating to *top* and *bottom*.

EXPERIMENT VI.

Place a man on a cake of wax, and present him the wire of the electrified phial to touch, you standing on the floor, and holding it in your hand. As often as he touches it, he will be electrified *plus*; and any one standing on the floor may draw a spark from him. The fire in this experiment passes out of the wire into him; and at the same time out of your hand into the bottom of the bottle.

EXPERIMENT VII.

Give him the electrical phial to hold; and do you touch the wire; as often as you touch it he will be electrified *minus*, and may draw a spark from any one standing on the floor. The fire now passes from the wire to you, and from him into the bottom of the bottle.

EXPERIMENT VIII.

Lay two books on two glasses, back towards back, two or three inches distant. Set the electrified phial on one, and then touch the wire; that book will be electrified *minus*; the electrical fire being drawn out of it by the bottom of the bottle. Take off the bottle, and holding it in your hand, touch the other with the wire; that book will be electrified *plus*; the fire passing into it from the wire, and the bottle is at the same time supplied from your hand. A suspended small cork-ball will play between these books till the equilibrium is restored.

EXPERIMENT IX.

When a body is electrified *plus*, it will repel a positively electrified feather or small cork-ball. When *minus* (or when in the common state) it will attract them, but stronger when *minus* than when in the common state, the difference being greater.

EXPERIMENT X.

Though, as in *Experiment* VI, a man standing on wax may be electrised a number of times by repeatedly touching the wire of an electrised bottle (held in the hand of one standing on the floor) he receiving the fire from the wire each time; yet holding it in his own hand, and touching the wire, though he draws a strong spark, and is violently shocked, no electricity remains in him; the fire only passing through him, from the upper to the lower part of the bottle. Observe, before the shock, to let some one on the floor touch him to restore the equilibrium in his body; for in taking hold of the bottom of the bottle, he sometimes becomes a little electrised *minus*, which will continue after the shock, as would also any *plus* electricity, which he might have given him before the shock. For restoring the equilibrium in the bottle, does not at all affect the electricity in the man through whom the fire passes

that electricity is neither increased nor diminished.

EXPERIMENT XI.

The passing of the electrical fire from the upper to the lower part* of the bottle, to restore the equilibrium, is rendered strongly visible by the following pretty experiment. Take a book whose covering is filletted with gold; bend a wire of eight or ten inches long, in the form of (*m*) Fig. 5; slip it on the end of the cover of the book, over the gold line, so as that the shoulder of it may press upon one end of the gold line, the ring up, but leaning towards the other end of the book. Lay the book on a glass or wax,† and on the other end of the gold lines set the bottle electrised: then bend the springing wire, by pressing it with a stick of wax till its ring approaches the ring of the bottle wire, instantly there is a strong spark and stroke, and the whole line of gold, which completes the communication, between the top and bottom of the bottle, will appear a vivid flame, like the sharpest lightning. The closer the contact between the shoulder of the wire, and the gold at one end of the line, and between the bottom of the bottle and the gold at the other end, the better the experiment succeeds. The room should be darkened. If you would have the whole filletting round the cover appear in fire at once, let the bottle and wire touch the gold in the diagonally opposite corners.

B. FRANKLIN.

To Peter Collinson, London.

Farther Experiments, confirming the preceding Observations.—Leyden Bottle analysed.—Electrical Battery.—Magical Picture.—Electrical Wheel or Jack.—Electrical Feast.

PHILADELPHIA, 1748.

1. THERE will be the same explosion and shock if the electrified phial is held in one hand by the hook, and the coating touched with the other, as when held by the coating, and touched at the hook.

2. To take the charged phial safely by the hook, and not at the same time diminish its force, it must first be set down on an electric *per se*.

3. The phial will be electrified as strongly, if held by the hook, and the coating applied to the globe or tube; as when held by the coating, and the hook applied‡.

4. But the *direction* of the electrical fire being different in the charging, will also be different in the explosion. The bottle charged through the hook, will be discharged through the hook; the bottle charged through the coating, will be discharged through the coating, and not otherways; for the fire must come out the same way it went in.

5. To prove this, take two bottles that were equally charged through the hooks, one in each hand; bring their hooks near each other, and no spark or shock will follow; because each hook is disposed to give fire, and neither to receive it. Set one of the bottles down on glass, take it up by the hook, and apply its coating to the hook of the other; then there will be an explosion and shock, and both bottles will be discharged.

6. Vary the experiment, by charging two phials equally, one through the hook, the other through the coating: hold that by the coating which was charged through the hook, and that by the hook which was charged through the coating: apply the hook of the first to the coating of the other, and there will be no shock or spark. Set that down on glass which you held by the hook, take it up by the coating, and bring the two hooks together: a spark and shock will follow, and both phials be discharged.

In this experiment the bottles are totally discharged, or the equilibrium within them restored. The *abounding* of fire in one of the hooks (or rather in the internal surface of one bottle) being exactly equal to the *wanting* of the other; and therefore as each bottle has in itself the *abounding* as well as the *wanting*, the wanting and abounding must be equal in each bottle. See § 8, 9, 10, 11. But if a man holds in his hands two bottles, one fully electrified, the other not at all, and brings their hooks together, he has but half a shock, and the bottles will both remain half electrified, the one being half discharged, and the other half charged.

7. Place two phials equally charged on a table at five or six inches distance. Let a cork-ball, suspended by a silk thread, hang between them. If the phials were both charged through their hooks, the cork, when it has been attracted and repelled by the one, will not be attracted, but equally repelled by the other. But if the phials were charged, the one through the hook, and the other* through the coating, the ball, when it is repelled from one hook, will be as strongly attracted by the other, and play vigorously between them, fetching the electric fluid from the one, and delivering it to the other, till both phials are nearly discharged.

8. When we use the terms of *charging*

* *i. e.* From the *inside* to the *outside*.

† Placing the book on glass or wax is not necessary to produce the appearance; it is only to show that the visible electricity is not brought up from the common stock in the earth.

‡ This was a discovery of the very ingenious Mr. Kinnersley, and by him communicated to me.

* To charge a bottle commodiously through the coating, place it on a glass stand; form a communication from the prime conductor to the coating, and another from the hook to the wall or floor. When it is charged, remove the latter communication before you take hold of the bottle, otherwise great part of the fire will escape by it.

and *discharging* the phial, it is in compliance with custom, and for want of others more suitable. Since we are of opinion that there is really no more electrical fire in the phial after what is called its *charging*, than before, nor less after its *discharging;* excepting only the small spark that might be given to, and taken from the non-electric matter, if separated from the bottle, which spark may not be equal to a five hundredth part of what is called the explosion.

For, if on the explosion, the electrical fire came out of the bottle by one part, and did not enter in again by another, then, if a man, standing on wax, and holding the bottle in one hand, takes the spark by touching the wire hook with the other, the bottle being thereby *discharged*, the man would be *charged;* or whatever fire was lost by one, would be found in the other, since there was no way for its escape: but the contrary is true.

9. Besides, the phial will not suffer what is called a *charging*, unless as much fire can go out of it one way, as is thrown in by another. A phial cannot be charged standing on wax or glass, or hanging on the prime conductor, unless a communication be formed between its coating and the floor.

10. But suspend two or more phials on the prime conductor, one hanging on the tail of the other; and a wire from the last to the floor, an equal number of turns of the wheel shall charge them all equally, and every one as much as one alone would have been. What is driven out at the tail of the first, serving to charge the second; what is driven out of the second, charging the third; and so on. By this means a great number of bottles might be charged with the same labour, and equally high, with one alone; were it not that every bottle receives new fire, and loses its old with some reluctance, or rather gives some small resistance to the charging, which in a number of bottles becomes more equal to the charging power, and so repels the fire back again on the globe, sooner in proportion than a single bottle would do.

11. When a bottle is charged in the common way, its *inside* and *outside* surfaces stand ready, the one to give fire by the hook, the other to receive it by the coating; the one is full, and ready to throw out, the other empty and extremely hungry; yet as the first will not *give out*, unless the other can at the same instant *receive in;* so neither will the latter receive in, unless the first can at the same instant give out. When both can be done at once, it is done with inconceivable quickness and violence.

12. So a straight spring (though the comparison does not agree in every particular) when forcibly bent, must, to restore itself, contract that side which in the bending was extended, and extend that which was contracted; if either of these two operations be hindered, the other cannot be done. But the spring is not said to be *charged* with elasticity when bent, and discharged when unbent; its quantity of elasticity is always the same.

13. Glass in like manner, has, within its substance, always the same quantity of electrical fire, and that a very great quantity in proportion to the mass of glass, as shall be shown hereafter.

14. This quantity, proportioned to the glass, it strongly and obstinately retains, and will have neither more nor less, though it will suffer a change to be made in its parts and situation; *i. e.* we may take away part of it from one of the sides, provided we throw an equal quantity into the other.

15. Yet when the situation of the electrical fire is thus altered in the glass; when some has been taken from side, and some added to the other, it will not be at rest or in its natural state, till it is restored to its original equality. And this restitution cannot be made through the substance of the glass, but must be done by non-electric communication formed without, from surface to surface.

16. Thus, the whole force of the bottle, and power of giving a shock, is in the GLASS ITSELF; the non-electrics in contact with the two surfaces, serving only to *give* and *receive* to and from the several parts of the glass; that is, to give on one side, and take away from the other.

17. This was discovered here in the following manner: purposing to analyse the electrified bottle, in order to find wherein its strength lay, we placed it on glass, and drew out the cork and wire which for that purpose had been loosely put in. Then taking the bottle in one hand, and bringing a finger of the other near its mouth, a strong spark came from the water, and the shock was as violent as if the wire had remained in it, which showed that the force did not lie in the wire. Then to find if it resided in the water, being crowded into and condensed in it, as confined by the glass, which had been our former opinion, we electrified the bottle again, and placing it on glass, drew out the wire and cork as before; then taking up the bottle, we decanted all its water into an empty bottle, which likewise stood on glass; and taking up that other bottle, we expected, if the force resided in the water, to find a shock from it; but there was none. We judged then that it must either be lost in decanting, or remain in the first bottle. The latter we found to be true; for that bottle on trial gave the shock, though filled up as it stood with fresh unelectrified water from a tea-pot. To find, then, whether glass had this property merely as glass, or whether the form contributed any thing to it; we took a pane of sash-glass, and laying it on the hand, placed a plate of lead on its upper surface;

then electrified that plate, and bringing a finger to it, there was a spark and shock. We then took two plates of lead of equal dimensions, but less than the glass by two inches every way, and electrified the glass between them, by electrifying the uppermost lead; then separated the glass from the lead, in doing which, what little fire might be in the lead was taken out, and the glass being touched in the electrified parts with a finger, afforded only very small pricking sparks, but a great number of them might be taken from different places. Then dextrously placing it again between the leaden plates, and completing a circle between the two surfaces, a violent shock ensued; which demonstrated the power to reside in glass as glass, and that the non-electrics in contact served only, like the armature of a loadstone, to unite the force of the several parts, and bring them at once to any point desired: it being the property of a non-electric, that the whole body instantly receives or gives what electrical fire is given to or taken from any one of its parts.

18. Upon this we made what we called an *electrical battery*, consisting of eleven panes of large sash-glass, armed with thin leaden plates, pasted on each side, placed vertically, and supported at two inches distance on silk cords, with thick hooks of leaden wire, one from each side, standing upright, distant from each other, and convenient communications of wire and chain, from the giving side of one pane, to the receiving side of the other; that so the whole might be charged together, and with the same labour as one single pane; and another contrivance to bring the giving sides, after charging, in contact with one long wire, and the receivers with another, which two long wires would give the force of all the plates of glass at once through the body of any animal forming the circle with them. The plates may also be discharged separately, or any number together that is required. But this machine is not much used, as not perfectly answering our intention with regard to the ease of charging, for the reason given *sec.* 10. We made also of large glass panes, magical pictures, and self-moving animated wheels, presently to be described.

19. I perceive by the ingenious Mr. Watson's last book, lately received, that Dr. Bevis had used, before we had, panes of glass to give a shock;* though, till that book came to hand, I thought to have communicated it to you as a novelty. The excuse for mentioning it here is, that we tried the experiment differently, drew different consequences from it (for Mr. Watson still seems to think the fire *accumulated on the non-electric*, that is in contact with the glass, p. 72) and, as far as we hitherto know, have carried it farther.

* I have since heard that Mr. Smeaton was the first who made use of panes of glass for that purpose.

20. The magical picture* is made thus: Having a large mezzotinto with a frame and glass, suppose of the KING, take out the print, and cut a pannel out of it near two inches distant from the frame all around. If the cut is through the picture it is not the worse. With thin paste, or gum water, fix the border that is cut off on the inside the glass, pressing it smooth and close; then fill up the vacancy by gilding the glass well with leaf-gold, or brass. Gild likewise the inner edge of the back of the frame all round, except the top part, and form a communication between that gilding and the gilding behind the glass: then put in the board, and that side is finished. Turn up the glass, and gild the foreside exactly over the back gilding, and when it is dry, cover it, by pasting on the pannel of the picture that hath been cut out, observing to bring the correspondent parts of the border and picture together, by which the picture will appear of a piece, as at first, only part is behind the glass, and part before. Hold the picture horizontally by the top, and place a little moveable gilt crown on the king's head. If now the picture be moderately electrified, and another person take hold of the frame with one hand, so that his fingers touch its inside gilding, and with the other hand endeavour to take off the crown, he will receive a terrible blow, and fail in the attempt. If the picture were highly charged, the consequences might perhaps be as fatal† as that of high treason, for when the spark is taken through a quire of paper laid on the picture by means of a wire communication, it makes a fair hole through every sheet, that is, through forty-eight leaves, though a quire of paper is thought good armour against the push of a sword, or even against a pistol bullet, and the crack is exceeding loud. The operator, who holds the picture by the upper end, where the inside of the frame is not gilt, to prevent its falling, feels nothing of the shock, and may touch the face of the picture without danger, which he pretends is a test of his loyalty.—If a ring of persons take the shock among them, the experiment is called *The Conspirators*.

21. On the principle, in *sec.* 7, that hooks of bottles, differently charged, will attract and repel differently, is made an electrical wheel, that turns with considerable strength. A small upright shaft of wood passes at right angles through a thin round board, of about twelve inches diameter, and turns on a sharp point of iron, fixed in the lower end, while a strong wire in the upper end, passing through a small hole in a thin brass plate, keeps the shaft truly vertical. About thirty *radii* of equal length, made of sash-glass, cut in narrow strips, issue horizontally from the cir-

* Contrived by Mr. Kinnersly.

† We have since found it fatal to small animals, though not to large ones. The biggest we have yet killed is a hen. 1750.

cumference of the board, the ends most distant from the centre being about four inches apart. On the end of every one a brass thimble is fixed. If now the wire of a bottle electrified in the common way, be brought near the circumference of this wheel, it will attract the nearest thimble, and so put the wheel in motion; that thimble, in passing by, receives a spark, and thereby being electrified is repelled, and so driven forwards; while a second being attracted, approaches the wire, receives a spark, and is driven after the first, and so on till the wheel has gone once round, when thimbles before electrified approaching the wire, instead of being attracted as they were at first, are repelled, and the motion presently ceases.—But if another bottle, which had been charged through the coating, be placed near the same wheel, its wire will attract the thimble repelled by the first, and thereby double the force that carries the wheel round; and not only taking out the fire that had been communicated to the thimbles by the first bottle, but even robbing them of their natural quantity, instead of being repelled when they come again towards the first bottle, they are more strongly attracted, so that the wheel mends its pace, till it goes with great rapidity twelve or fifteen rounds in a minute, and with such strength, as that the weight of one hundred Spanish dollars with which we once loaded it, not seem in the least to retard its motion—This is called an electrical jack; and if a large fowl were spitted on the upright shaft, it would be carried round before a fire with a motion fit for roasting.

22. But this wheel, like those driven by wind, water, or weights, moves by a foreign force, to wit, that of the bottles. The self-moving wheel, though constructed on the same principles, appears more surprising. It is made of a thin round plate of window glass, seventeen inches diameter, well gilt on both sides, all but two inches next the edge. Two small hemispheres of wood are then fixed with cement to the middle of the upper and under sides, centrally opposite, and in each of them a thick strong wire eight or ten inches long, which together make the axis of the wheel. It turns horizontally on a point at the lower end of its axis, which rests on a bit of brass cemented within a glass salt-cellar. The upper end of its axis passes through a hole in a thin brass plate cemented to a long strong piece of glass, which keeps it six or eight inches distant from any non-electric, and has a small ball of wax or metal on its top, to keep in the fire. In a circle on the table which supports the wheel, are fixed twelve small pillars of glass, at about four inches distance, with a thimble on the top of each. On the edge of the wheel is a small leaden bullet, communicating by a wire with the gilding of the *upper* surface of the wheel; and about six inches from it is another bullet, communicating in like manner with the *under* surface. When the wheel is to be charged by the upper surface, a communication must be made from the under surface to the table. When it is well charged it begins to move; the bullet nearest to a pillar moves towards the thimble on that pillar, and passing by electrifies it, and then pushes itself from it; the succeeding bullet, which communicates with the other surface of the glass, more strongly attracts that thimble, on account of its being before electrified by the other bullet; and thus the wheel increases its motion till it comes to such a height as that the resistance of the air regulates it. It will go half an hour, and make one minute with another twenty turns in a minute, which is six hundred turns in the whole; the bullet of the upper surface giving in each turn twelve sparks to the thimbles, which makes seven thousand two hundred sparks; and the bullet of the under surface receiving as many from the thimbles; those bullets moving in the time near two thousand five hundred feet.—The thimbles are well fixed, and in so exact a circle, that the bullets may pass within a very small distance of each of them.—If instead of two bullets you put eight, four communicating with the upper surface, and four with the under surface, placed alternately, with eight, at about six inches distance, completes the circumference, the force and swiftness will be greatly increased, the wheel making fifty turns in a minute; but then it will not continue moving so long.—These wheels may be applied, perhaps, to the ringing of chimes,* and moving of light-made orreries.

23. A small wire bent circularly, with a loop at each end; let one end rest against the under surface of the wheel, and bring the other end near the upper surface, it will give a terrible crack, and the force will be discharged.

24. Every spark in that manner drawn from the surface of the wheel, makes a round hole in the gilding, tearing off a part of it in coming out; which shows that the fire is not accumulated on the gilding, but is in the glass itself.

25. The gilding being varnished over with turpentine varnish, the varnish though dry and hard, is burnt by the spark drawn through it, and gives a strong smell and visible smoke. And when the spark is drawn through paper, all round the hole made by it, the paper will be blacked by the smoke, which sometimes penetrates several of the leaves. Part of the gilding torn off is also found forcibly driven into the hole made in the paper by the stroke.

26. It is amazing to observe in how small

* This was afterwards done with success by Mr. Kinnersley.

a portion of glass a great electral force may lie. A thin glass bubble, about an inch diameter, weighing only six grains, being half filled with water, partly gilt on the outside, and furnished with a wire hook, gives, when electrified, as great a shock as a man can well bear. As the glass is thickest near the orifice, I suppose the lower half, which being gilt was electrified and gave the shock, did not exceed two grains; for it appeared when broken, much thinner than the upper half.—If one of these thin bottles be electrified by the coating, and the spark taken out through the gilding, it will break the glass inwards, at the same time that it breaks the gilding outwards.

27. And allowing (for the reasons before given, § 8, 9, 10,) that there is no more electral fire in a bottle after charging, than before, how great must be the quantity in this small portion of glass! It seems as if it were of its very substance and essence. Perhaps if that due quantity of electral fire so obstinately retained by glass, could be separated from it, it would no longer be glass; it might lose its transparency, or its brittleness, or its elasticity.—Experiments may possibly be invented hereafter, to discover this.

28. We were surprised at the account given in Mr. Watson's book, of a shock communicated through a great space of dry ground, and suspect there must be some metalline quality in the gravel of that ground; having found that simple dry earth, rammed in a glass tube, open at both ends, and a wire hook inserted in the earth at each end, the earth and wires making part of a circuit, would not conduct the least perceptible shock, and indeed when one wire was electrified, the other hardly showed any signs of its being in connexion with it.* Even a thoroughly wet packthread sometimes fails of conducting a shock, though it otherwise conducts electricity very well. A dry cake of ice, or an icicle held between two in a circle, likewise prevents the shock, which one would not expect, as water conducts it so perfectly well.—Gilding on a new book, though at first it conducts the shock extremely well, yet fails after ten or a dozen experiments, though it appears otherwise in all respects the same, which we cannot account for.†

29. There is one experiment more which surprises us, and is not hitherto satisfactorily accounted for; it is this: place an iron shot on a glass stand, and let a ball of damp cork, suspended by a silk thread, hang in contact with the shot. Take a bottle in each hand, one that is electrified through the hook, the other through the coating: apply the giving wire to the shot, which will electrify it *positively*, and the cork shall be repelled: then apply the requiring wire, which will take out the spark given by the other; when the cork will return to the shot: apply the same again, and take out another spark, so will the shot be electrified *negatively*, and the cork in that case shall be repelled equally as before. Then apply the giving wire to the shot, and give the spark it wanted, so will the cork return: give it another, which will be an addition to its natural quantity, so will the cork be repelled again: and so may the experiment be repeated as long as there is any charge in the bottles. Which shows that bodies, having less than the common quantity of electricity, repel each other, as well as those that have more.

Chagrined a little that we have been hitherto able to produce nothing in this way of use to mankind; and the hot weather coming on, when electrical experiments are not so agreeable, it is proposed to put an end to them for this season, somewhat humourously, in a party of pleasure, on the banks of *Schuylkill*.* Spirits at the same time, are to be fired by a spark sent from side to side through the river, without any other conductor than the water; an experiment which we some time since performed, to the amazement of many.† A turkey is to be killed for our dinner by the *electrical shock*, and roasted by the *electrical jack*, before a fire kindled by the *electrified bottle*: when the healths of all the famous electricians in England, Holland, France, and Germany are to be drank in *electrified bumpers*,‡ under the discharge of guns from the *electrical battery*.

* Probably the ground is never so dry.

† We afterwards found that it failed after one stroke with a large bottle; and the continuity of the gold appearing broken, and many of its parts dissipated, the electricity could not pass the remaining parts without leaping from part to part through the air, which always resists the motion of this fluid, and was probably the cause of the gold's not conducting so well as before; the number of interruptions in the line of gold, making, when added together a space larger, perhaps, than the striking distance.

* The river that washes the west side of Philadelphia, as the Delaware does the east side.

† As the possibility of this experiment has not been easily conceived, I shall here describe it.—Two iron rods, about three feet long, were planted just within the margin of the river on the opposite sides. A thick piece of wire, with a small round knob at its end, was fixed on the top of one of the rods, bending downwards, so as to deliver commodiously the spark upon the surface of the spirit. A small wire fastened by one end to the handle of the spoon, containing the spirit, was carried across the river, and supported in the air by the rope commonly used to hold by, in drawing the ferry-boats over. The other end of this wire was tied round the coating of the bottle; which being charged, the spark was delivered from the hook to the top of the rod standing in the water on that side. At the same instant the rod on the other side delivered a spark into the spoon, and fired the spirit; the electric fire returning to the coating of the bottle through the handle of the spoon and the supported wire connected with them.

That the electric fire thus actually passes through the water, has since been satisfactorily demonstrated to many by an experiment of Mr. Kinnersley's, performed in a trough of water about ten feet long. The hand being placed under water in the direction of the spark (which always takes the strait or shortest course, if sufficient, and other circumstances are equal) is struck and penetrated by it as it passes.

‡ An *Electrified bumper* is a small thin glass tumbler,

To Peter Collinson, London.

*Observations and suppositions, towards forming a new Hypothesis for explaining the several Phenomena of Thunder-gusts.**

1. Non-electric bodies, that have electric fire thrown into them, will retain it till other electrics, that have less, approach; and then it is communicated by a snap, and becomes equally divided.

2. Electrical fire loves water, is strongly attracted by it, and they can subsist together.

3. Air is an electric *per se*, and when dry will not conduct the electrical fire; it will neither receive it, nor give it to other bodies; otherwise no body surrounded by air, could be electrified positively and negatively: for should it be attempted positively, the air would immediately take away the overplus; or negatively, the air would supply what was wanting.

4. Water being electrified, the vapours arising from it will be equally electrified; and floating in the air, in the form of clouds, or otherwise, will retain that quantity of electrical fire, till they meet with other clouds or bodies not so much electrified, and then will communicate as before-mentioned.

5. Every particle of matter electrified is repelled by every other particle equally electrified. Thus the stream of a fountain, naturally dense and continual, when electrified, will separate and spread in the form of a brush, every drop endeavouring to recede from every other drop. But on taking out the electrical fire they close again.

6. Water being strongly electrified (as well as when heated by common fire) rises in vapours more copiously; the attraction of cohesion among its particles being greatly weakened, by the opposite power of repulsion introduced with the electrical fire; and when any particle is by any means disengaged, it is immediately repelled, and so flies into the air.

7. Particles happening to be situated as *A* and *B*, (Fig. VI. *representing the profile of a vessel of water*) are more easily disengaged than *C* and *D*, as each is held by contact with three only, whereas *C* and *D* are each in contact with nine. When the surface of the water has the least motion, particles are continually pushed into the situation represented by *A* and *B*.

8. Friction between a non-electric and an electric *per se* will produce electrical fire; not by *creating* but *collecting* it; for it is equally diffused in our walls, floors, earth, and the whole mass of common matter. Thus the whirling glass globe, during its friction against the cushion, draws fire from the cushion, the cushion is supplied from the frame of the machine, that from the floor on which it stands. Cut off the communication by thick glass or wax, placed under the cushion, and no fire can be *produced*, because it cannot be *collected*.

9. The ocean is a compound of water, a non-electric, and salt an electric *per se*.

10. When there is a friction among the parts near its surface, the electrical fire is collected from the parts below. It is then plainly visible in the night; it appears in the stern and in the wake of every sailing vessel; every dash of an oar shows it, and every surf and spray: in storms the whole sea seems on fire.—The detached particles of water then repelled from the electrified surface, continually carry off the fire as it is collected; they rise and form clouds, and those clouds are highly electrified, and retain the fire till they have an opportunity of communicating it.

11. The particles of water, rising in vapours, attach themselves to particles of air.

12. The particles of air are said to be hard, round, separate and distant from each other; every particle strongly repelling every other particle, whereby they recede from each other, as far as common gravity will permit.

13. The space between any three particles, equally repelling each other, will be an equilateral triangle.

14. In air compressed, these triangles are smaller; in ratified air they are larger.

15. Common fire, joined with air, increases the repulsion, enlarges the triangles, and thereby makes the air specifically lighter. Such air, among denser air, will rise.

16. Common fire, as well as electrical fire, gives repulsion to the particles of water, and destroys their attraction of cohesion; hence common fire, as well as electrical fire, assists in raising vapours.

17. Particles of water, having no fire in them, mutually attract each other. These particles of water then, being attached to the three particles of a triangle of air, would, by their mutual attraction operating against the air's repulsion, shorten the sides and lessen the triangle, whereby that portion of air made denser, would sink to the earth with its water, and not rise to the formation of a cloud.

18. But if every particle of water attaching itself to air brings with it a particle of common fire, the repulsion of the air being assisted and strengthened by the fire, more than obstructed by the mutual attraction of the particles of water, the triangle dilates, and that portion of air, becoming rarer and specifically lighter, rises.

19. If the particles of water bring electrical fire when they attach themselves to air, the repulsion between the particles of water

nearly filled with wine and electrified as the bottle. This when brought to the lips gives a shock, if the party be close shaved, and does not breath on the liquor. April 29, 1749.

* Thunder-gusts are sudden storms of thunder and lightning, which are frequently of short duration, but sometimes produce mischievous effects.

electrified, joins with the natural repulsion of the air, to force its particles to a greater distance, whereby the triangles are dilated, and the air rises, carrying up with it the water.

20. If the particles of water bring with them portions of *both sorts* of fire, the repulsion of the particles of air is still more strengthened and increased, and the triangles farther enlarged.

21. One particle of air may be surrounded by twelve particles of water of equal size with itself, all in contact with it; and by more added to those.

22. Particles of air, thus loaded would be drawn nearer together by the mutual attraction of the particles of water, did not the fire, common or electrical, assist their repulsion.

23. If air, thus loaded, be compressed by adverse winds, or by being driven against mountains, &c., or condensed by taking away the fire that assisted it in expanding; the triangles contract, the air with its water will descend as a dew; or, if the water surrounding one particle of air comes in contact with the water surrounding another, they coalesce and form a drop, and we have rain.

24. The sun supplies (or seems to supply) common fire to vapours, whether raised from earth or sea.

25. Those vapours, which have both common and electrical fire in them, are better supported than those which have only common fire in them; for when vapours rise into the coldest region above the earth, the cold will not diminish the electrical fire, if it doth the common.

26. Hence clouds, formed by vapours raised from fresh waters within land, from growing vegetables, moist earth, &c. more speedily and easily deposite their water, having but little electrical fire to repel and keep the particles separate. So that the greatest part of the water raised from the land, is let fall on the land again; and winds blowing from the land to the sea are dry; there being little use for rain on the sea, and to rob the land of its moisture, in order to rain on the sea, would not appear reasonable.

27. But clouds, formed by vapours raised from the sea, having both fires, and particularly a great quantity of the electrical, support their water strongly, raise it high, and being moved by winds, may bring it over the middle of the broadest continent from the middle of the widest ocean.

28. How these ocean clouds, so strongly supporting their water are made to deposite it on the land where it is wanted is next to be considered.

29. If they are driven by winds against mountains, those mountains being less electrified attract them, and on contact take away their electrical fire (and being cold, the common fire also;) hence the particles close towards the mountains and towards each other If the air was not much loaded, it only falls in dews on the mountain tops and sides, forms springs, and descends to the vales in rivulets, which, united, make larger streams and rivers. If much loaded, the electrical fire is at once taken from the whole cloud; and, in leaving it, flashes brightly and cracks loudly; the particles instantly coalescing for want of that fire, and falling in a heavy shower.

30. When a ridge of mountains thus dams the clouds, and draws the electrical fire from the cloud first approaching it; that which next follows, when it comes near the first cloud, now deprived of its fire, flashes into it, and begins to deposite its own water; the first cloud again flashing into the mountains; the third approaching cloud, and all succeeding ones, acting in the same manner as far back as they extend, which may be over many hundred miles of country.

31. Hence the continual storms of rain, thunder, and lightning on the east side of the Andes, which running north and south, and being vastly high, intercept all the clouds brought against them from the Atlantic ocean by the trade winds, and oblige them to deposite their waters, by which the vast rivers Amazons, La Plata, and Oroonoko are formed, which return the water into the same sea after having fertilized a country of very great extent.

32. If a country be plain, having no mountains to intercept the electrified clouds, yet it is not without means to make them deposite their water. For if an electrified cloud, coming from the sea, meets in the air a cloud raised from the land, and therefore not electrified, the first will flash its fire into the latter, and thereby both clouds shall be made suddenly to deposite water.

33. The electrified particles of the first cloud close when they lose their fire; the particles of the other clouds close in receiving it: in both, they have thereby an opportunity of coalescing into drops.—The concussion, or jerk given to the air, contributes also to shake down the water, not only from those two clouds, but from others near them. Hence the sudden fall of rain immediately after flashes of lightning.

34. To show this by an easy experiment: take two round pieces of pasteboard two inches diameter; from the centre circumference of each of them suspend by fine silk threads eighteen inches long, seven small balls of wood, or seven peas equal in goodness: so will the balls appending to each pasteboard, form equal equilateral triangles, one ball being in the centre, and six at equal distances from that, and from each other; and thus they represent particles of air. Dip both sets in water, and some adhering to each ball, they will represent air loaded. Dexterously electrify one

set, and its balls will repel each other to a greater distance, enlarging the triangles. Could the water supported by seven balls come into contact, it would form a drop or drops so heavy as to break the cohesion it had with the balls, and so fall. Let the two sets then represent two clouds, the one a sea cloud electrified, the other a land cloud. Bring them within the sphere of attraction, and they will draw towards each other, and you will see the separated balls close thus; the first electrified ball that comes near an unelectrified ball by attraction joins it, and gives it fire; instantly they separate, and each flies to another ball of its own party, one to give, the other to receive fire; and so it proceeds through both sets, but so quick as to be in a manner instantaneous. In the cohesion they shake off and drop their water which represents rain.

35. Thus when sea and land clouds would pass at two great a distance for the flash, they are attracted towards each other till within that distance; for the sphere of electrical attraction is far beyond the distance of flashing.

36. When a great number of clouds from the sea meet a number of clouds raised from the land, the electrical flashes appear to strike in different parts; and as the clouds are jostled and mixed by the winds, or brought near by the electrical attraction, they continue to give and receive flash after flash, till the electrical fire is equally dissolved.

37. When the gun-barrel, (in electrical experiments) has but little electrical fire in it, you must approach it very near with your knuckle before you can draw a spark. Give it more fire, and it will give a spark at a greater distance. Two gun-barrels united, and as highly electrified, will give a spark at a still greater distance. But if two gun-barrels electrified will strike at two inches distance, and make a loud snap, to what a great distance may 10,000 acres of electrified cloud strike and give its fire, and how loud must be that crack!

38. It is a common thing to see clouds at different heights passing different ways, which shows different currents of air one under the other. As the air between the tropics is rarified by the sun, it rises, the denser northern and southern air pressing into its place. The air so rarified and forced up, passes northward and southward, and must descend in the polar regions, if it has no opportunity before, that the circulation may be carried on.

39. As currents of air, with the clouds therein, pass different ways, it is easy to conceive how the clouds, passing over each other, may attract each other, and so come near enough for the electrical stroke. And also how electrical clouds may be carried within land very far from the sea, before they have an opportunity to strike.

When the air, with its vapours raised from the ocean between the tropics, comes to descend in the polar regions and to be in contact with the vapours arising there, the electrical fire they brought begins to be communicated, and is seen in clear nights, being first visible where it is first in motion, that is, where the contact begins, or in the most northern part; from thence the streams of light seem to shoot southerly, even up to the zenith of northern countries. But though the light seems to shoot from the north southerly, the progress of the fire is really from the south northerly, its motion beginning in the north, being the reason that it is there seen first.

For the electrical fire is never visible but when in motion, and leaping from body to body, or from particle to particle through the air. When it passes through dense bodies it is unseen. When a wire makes part of the circle, in the explosion of the electrical phial, the fire, though in great quantity, passes in the wire invisibly; but in passing along a chain, it becomes visible as it leaps from link to link. In passing along leaf gilding it is visible: for the leaf-gold is full of pores; hold a leaf to the light and it appears like a net, and the fire is seen in it leaping over the vacancies.—And as when a long canal filled with still water is opened at one end, in order to be discharged, the motion of the water begins first near the opened end, and proceeds towards the close end, though the water itself moves from the close towards the opened end: so the electrical fire discharged into the polar regions, perhaps from a thousand leagues length of vapourised air, appears first where it is first in motion, *i. e.* in the most northern part, and the appearance proceeds southward, though the fire really moves northward. This is supposed to account for the *aurora borealis*.

41. When there is great heat on the land, in a particular region (the sun having shone on it perhaps several days, while the surrounding countries have been screened by clouds) the lower air is rarified and rises, the cooler denser air above descends; the clouds in that air meet from all sides, and join over the heated place; and if some are electrified, others not, lightning and thunder succeed, and showers fall. Hence thunder-gusts after heats, and cool air after gusts; the water and the clouds that bring it, coming from a higher and therefore a cooler region.

42. An electrical spark, drawn from an irregular body at some distance is scarcely ever strait, but shows crooked and waving in the air. So do the flashes of lightning; the clouds being very irregular bodies.

43. As electrified clouds pass over a country, high hills and high trees, lofty towers, spires, masts of ships, chimneys, &c., as so many prominences and points, draw the elec-

trical fire, and the whole cloud discharges there.

44. Dangerous, therefore, is it to take shelter under a tree, during a thunder-gust. It has been fatal to many, both men and beasts.

45. It is safer to be in the open field for another reason. When the clothes are wet, if a flash in its way to the ground should strike your head, it may run in the water over the surface of your body; whereas, if your clothes were dry, it would go through the body, because the blood and other humours, containing so much water, are more ready conductors.

Hence a wet rat cannot be killed by the exploding electrical bottle, when a dry rat may.*

46. Common fire is in all bodies, more or less, as well as electrical fire. Perhaps they may be different modifications of the same element; or they may be different elements. The latter is by some suspected.

47. If they are different things, yet they may and do subsist together in the same body.

48. When electrical fire strikes through a body, it acts upon the common fire contained in it, and puts that fire in motion; and if there be a sufficient quantity of each kind of fire, the body will be inflamed.

49. When the quantity of common fire in the body is small, the quantity of the electrical fire (or the electrical stroke) should be greater: if the quantity of common fire be great, less electrical fire suffices to produce the effect.

50. Thus spirits must be heated before we can fire them by the electrical spark.† If they are much heated, a small spark will do; if not, the spark must be greater.

51. Till lately we could only fire warm vapours: but now we can burn hard dry rosin. And when we can procure greater electrical sparks, we may be able to fire not only unwarmed spirits, as lightning does, but even wood, by giving sufficient agitation to the common fire contained in it, as friction we know will do.

52. Sulphureous and inflammable vapours, arising from the earth, are easily kindled by lightning. Besides what arise from the earth, such vapours are sent out by stacks of moist hay, corn, or other vegetables, which heat and reek. Wood, rotting in old trees or buildings, does the same. Such are therefore easily and often fired.

53. Metals are often melted by lightning, though perhaps not from heat in the lightning, nor altogether from agitated fire in the metals.—For as whatever body can insinuate itself between the particles of metal, and overcome the attraction by which they cohere (as sundry *menstrua* can) will make the solid become a fluid, as well as fire, yet without heating it: so the electrical fire, or lightning, creating a violent repulsion between the particles of the metal it passes through, the metal is fused.

54. If you would, by a violent fire, melt off the end of a nail, which is half driven into a door, the heat given the whole nail, before a part would melt, must burn the board it sticks in; and the melted part would burn the floor it dropped on. But if a sword can be melted in the scabbard, and money in a man's pocket by lightning, without burning either, it must be a cold fusion.*

55. Lightning rends some bodies. The electrical spark will strike a hole through a quire of strong paper.

56. If the source of lightning, assigned in this paper be the true one, there should be little thunder heard at sea from land. And accordingly, some old sea-captains, of whom inquiry has been made, do affirm, that the fact agrees perfectly with the hypothesis; for that in crossing the great ocean, they seldom meet with thunder till they come into soundings; and that the islands far from the continent have very little of it. And a curious observer, who lived thirteen years at Bermudas, says, there was less thunder there in that whole time than he has sometimes heard in a month at Carolina.

To Peter Collinson, London.

Introductory Letter to some additional Papers.

PHILADELPHIA, July 29, 1750.

As you first put us on electrical experiments, by sending, to our Library Company a tube, with directions how to use it; and as our honourable proprietary enabled us to carry those experiments to a greater height, by his generous present of a complete electrical apparatus; it is fit that both should know, from time to time, what progress we make. It was in this view I wrote and sent, you my former papers on this subject, desiring, that as I had not the honour of a direct correspondence with that bountiful benefactor to our library, they might be communicated to him through your hands. In the same view I write and send you this additional paper. If it happens to bring you nothing new, (which may well be, considering the number of ingenious men in

* This was tried with a bottle, containing about a quart. It is since thought that one of the large glass jars, mentioned in these papers, might have killed him, though wet.

† We have since fired spirits without heating them, when the weather is warm. A little, poured into the palm of the hand, will be warmed sufficiently by the hand, if the spirit be well rectified. Ether takes fire most readily.

* These facts, though related in several accounts, are now doubted; since it has been observed that the parts of a bell-wire which fell on the floor, being broken and partly melted by lightning, did actually burn into the boards. (See Philosophical Transactions, vol. li. part i.) And Mr. Kinnersley has found that a fine iron wire melted by electricity, has had the same effect.

Europe, continually engaged in the same researches) at least it will show, that the instruments put into our hands are not neglected; and that if no valuable discoveries are made by us, whatever the cause may be, it is not want of industry and application.—I am, sir, your much obliged humble servant,

B. FRANKLIN.

Opinions and conjectures, concerning the Properties and Effects of the electrical Matter, and the Means of preserving Buildings, Ships, &c. from Lightning, arising from Experiments and Observations made at Philadelphia, 1749—Golden Fish.—Extraction of effluvial Virtues by Electricity impracticable.

§ 1. The electrical matter consists of particles extremely subtile, since it can permeate common matter, even the densest metals, with such ease and freedom as not to receive any perceptible resistance.

2. If any one should doubt whether the electrical matter passes through the substance of bodies, or only over and along their surfaces, a shock from an electrified large glass jar, taken through his own body, will probably convince him.

3. Electrical matter differs from common matter in this, that the parts of the latter mutually attract, those of the former mutually repel each other. Hence the appearing divergency in a stream of electrified effluvia.

4. But though the particles of electrical matter do repel each other, they are strongly attracted by all other matter.*

5. From these three things, the extreme subtilty of the electrical matter, the mutual repulsion of its parts, and the strong attraction between them and other matter, arise this effect, that, when a quantity of electrical matter is applied to a mass of common matter, of any bigness or length, within our observation (which hath not already got its quantity) it is immediately and equally diffused through the whole.

6. Thus, common matter is a kind of spunge to the electrical fluid. And as a spunge would receive no water, if the parts of water were not smaller than the pores of the spunge; and even then but slowly, if there were not a mutual attraction between those parts and the parts of the spunge; and would still imbibe it faster, if the mutual attraction among the parts of the water did not impede, some force being required to separate them; and fastest, if, instead of attraction, there were a mutual repulsion among those parts, which would act in conjunction with the attraction of the spunge: so is the case between the electrical and common matter.

* See the ingenious Essays on Electricity, in the Transactions, by Mr. Ellicot.

7. But in common matter there is (generally) as much of the electrical as it will contain within its substance. If more is added, it lies without upon the surface, and forms what we call an electrical atmosphere; and then the body is said to be electrified.

8. It is supposed, that all kinds of common matter do not attract and retain the electrical, with equal strength and force, for reasons to be given hereafter: and that those called electrics *per se*, as glass, &c. attract and retain it strongest, and contain the greatest quantity.

9. We know that the electrical fluid is *in* common matter, because we can pump it *out* by the globe or tube. We know that common matter has near as much as it can contain, because, when we add a little more to any portion of it, the additional quantity does not enter, but forms an electrical atmosphere.—And we know that common matter has not (generally) more than it can contain, otherwise, all loose portions of it would repel each other, as they constantly do when they have electric atmospheres.

10. The beneficial uses of this electric fluid in the creation we are not yet well acquainted with, though doubtless such there are, and those very considerable; but we may see some pernicious consequences that would attend a much greater proportion of it. For, had this globe we live on, as much of it in proportion as we can give to a globe of iron, wood or the like, the particles of dust and other light matters that get loose from it, would by virtue of their separate electrical atmospheres, not only repel each other, but be repelled from the earth, and not easily be brought to unite with it again; whence our air would continually be more and more clogged with foreign matter, and grow unfit for respiration. This affords another occasion for adoring that wisdom which has made all things by weight and measure!

11. If a piece of common matter be suspended entirely free from electrical matter, and a single particle of the latter be brought nigh, it will be attracted and enter the body and take place in the centre, or where the attraction is every way equal. If more particles enter, they take their places where the balance is equal between the attraction of the common matter, and their own mutual repulsion. It is supposed they form triangles, whose sides shorten as their number increases; till the common matter has drawn in so many, that its whole power of compressing those triangles by attraction, is equal to their whole power of expanding themselves by repulsion; and then will such piece of matter receive no more.

12. When part of this natural proportion of electrical fluid is taken out of a piece of common matter, the triangles formed by the

remainder, are supposed to widen by the mutual repulsion of the parts, until they occupy the whole piece.

13. When the quantity of electrical fluid, taken from a piece of common matter, is restored again, it enters the expanded triangles, being again compressed till there is room for the whole.

14. To explain this: take two apples, or two balls of wood or other matter, each having its own natural quantity of the electrical fluid. Suspend them by silk lines from the ceiling. Apply the wire of a well-charged phial, held in your hand, to one of them (A *Fig.* 7,) and it will receive from the wire a quantity of the electrical fluid; but will not imbibe it, being already full. The fluid therefore will flow round its surface, and form an electrical atmosphere. Bring A into contact with B, and half the electrical fluid is communicated, so that each has now an electrical atmosphere, and therefore they repel each other. Take away these atmospheres, by touching the balls, and leave them in their natural state; then having fixed a stick of sealing-wax to the middle of the phial to hold it by, apply the wire to A, at the same time the coating touches B. Thus will a quantity of the electrical fluid be drawn out of B, and thrown on A. So that A will have a redundance of this fluid, which forms an atmosphere round, and B an exactly equal deficiency. Now, bring these balls again into contact, and the electrical atmosphere will not be divided between A and B, into two smaller atmospheres as before; for B will drink up the whole atmosphere of A, and both will be found again in their natural state.

15. The form of the electrical atmosphere is that of the body it surrounds. This shape may be rendered visible in a still air, by raising a smoke from dry rosin dropt into a hot tea-spoon under the electrified body, which will be attracted, and spread itself equally on all sides, covering and concealing the body.* And this form it takes, because it is attracted by all parts of the surface of the body, though it cannot enter the substance already replete. Without this attraction, it would not remain round the body, but dissipate in the air.

16. The atmosphere of electrical particles surrounding an electrified sphere, is not more disposed to leave it, or more easily drawn off from any one part of the sphere than another, because it is equally attracted by every part. But that is not the case with bodies of any other figure. From a cube it is more easily drawn at the corners than at the plain sides, and so from the angles of a body of any other form, and still most easily from the angle that is most acute. Thus, if a body shaped as A, B, C, D, E, in *Fig.* 8, be electrified, or have an electrical atmosphere communicated to it, and we consider every side as a base on which the particles rest, and by which they are attracted, one may see, by imagining a line from A to F, and another from E to G, that the portion of the atmosphere included in F, A, E, G, has the line A, E, for its basis. So the portion of atmosphere included in H, A, B, I, has the line A, B for its basis. And likewise the portion included in K, B, C, L, has B, C, to rest on; and so on the other side of the figure. Now if you would draw off this atmosphere with any blunt, smooth body, and approach the middle of the side A, B, you must come very near, before the force of your attractor exceeds the force or power with which that side holds its atmosphere. But there is a small portion between I, B, K, that has less of the surface to rest on, and to be attracted by, than the neighbouring portions, while at the same time there is a mutual repulsion between its particles, and the particles of those portions; therefore here you can get it with more ease, or at a greater distance. Between F, A, H, there is a larger portion that has yet a less surface to rest on, and to attract it; here, therefore, you can get it away still more easily. But easiest of all between L, C, M, where the quantity is largest, and the surface to attract and keep it back the least. When you have drawn away one of these angular portions of the fluid, another succeeds in its place, from the nature of fluidity, and the mutual repulsion beforementioned; and so the atmosphere continues flowing off at such angle, like a stream, till no more is remaining. The extremities of the portions of atmosphere over these angular parts, are likewise at a greater distance from the electrified body, as may be seen by the inspection of the above figure; the point of the atmosphere of the angle C, being much farther from C than any other part of the atmosphere over the lines C, B, or B, A: and, besides the distance arising from the nature of the figure, where the attraction is less, the particles will naturally expand to a greater distance by their mutual repulsion. On these accounts we suppose electrified bodies discharge their atmospheres upon unelectrified bodies more easily, and at a greater distance from their angles and points than from their smooth sides.—Those points will also discharge into the air, when the body has too great an electrical atmosphere, without bringing any non-electric near, to receive what is thrown off: for the air, though an electric *per se*, yet has always more or less water and other non-electric matters mixed with it: and these attract and receive what is so discharged.

17. But points have a property, by which they *draw on*, as well as *throw off* the electrical fluid, at greater distances than blunt bodies can. That is, as the pointed part of an

* See the second letter of date July 11, 1747.

electrified body will discharge the atmosphere of that body or communicate it farthest to another body, so the point of an unelectrified body will draw off the electrical atmosphere from an electrified body, farther than a blunter part of the same unelectrified body will do. Thus, a pin held by the head, and the point presented to an electrified body, will draw off its atmosphere at a foot distance; where, if the head were presented instead of the point, no such effect would follow. To understand this, we may consider, that if a person standing on the floor would draw off the electrical atmosphere from an electrified body, an iron crow and a blunt knitting-needle held alternately in his hand, and presented for that purpose, do not draw with different forces in proportion to their different masses. For the man, and what he holds in his hand, be it large or small, are connected with the common mass of unelectrified matter; and the force with which he draws is the same in both cases, it consisting in the different proportion of electricity in the electrified body, and that common mass. But the force with which the electrified body retains its atmosphere by attracting it, is proportioned to the surface over which the particles are placed; *i. e.* four square inches of that surface retain their atmosphere with four times the force that one square inch retains its atmosphere. And as in plucking the hairs from the horse's tail, a degree of strength not sufficient to pull away a handful at once, could yet easily strip it hair by hair: so a blunt body presented cannot draw off a number of particles at once, but a pointed one, with no greater force, takes them away easily, particle by particle.

18. These explanations of the power and operation of points, when they first occurred to me, and while they first floated in my mind, appeared perfectly satisfactory; but now I have written them, and considered them more closely, I must own I have some doubts about them; yet, as I have at present nothing better to offer in their stead, I do not cross them out: for, even a bad solution read, and its faults discovered, has often given rise to a good one, in the mind of an ingenious reader.

19. Nor is it of much importance to us to know the manner in which nature executes her laws; it is enough if we know the laws themselves. It is of real use to know that china left in the air unsupported will fall and break; but *how* it comes to fall, and *why* it breaks, are matters of speculation. It is a pleasure indeed to know them, but we can preserve our china without it.

20. Thus in the present case, to know this power of points may possibly be of some use to mankind, though we should never be able to explain it. The following experiments, as well as those in my first paper, show this power. I have a large prime conductor, made of several thin sheets of clothier's pasteboard, formed into a tube, near ten feet long and a foot diamater. It is covered with Dutch embossed paper, almost totally gilt. This large metallic surface supports a much greater electrical atmosphere than a rod of iron of 50 times the weight would do. It is suspended by silk lines, and when charged will strike, at near two inches distance, a pretty hard stroke, so as to make ones knuckle ache. Let a person standing on the floor present the point of a needle at 12 or more inches distance from it, and while the needle is so presented, the conductor cannot be charged, the point drawing off the fire as fast as it is thrown on by the electrical globe. Let it be charged, and then present the point at the same distance, and it will suddenly be discharged. In the dark you may see the light on the point, when the experiment is made. And if the person holding the point stands upon wax, he will be electrified by receiving the fire at that distance. Attempt to draw off the electricity with a blunt body, as a bolt of iron round at the end, and smooth (a silversmith's iron punch, inch thick is what I use) and you must bring it within the distance of three inches before you can do it, and then it is done with a stroke and crack. As the pasteboard tube hangs loose on silk lines, when you approach it with the punch-iron, it likewise will move towards the punch, being attracted while it is charged; but if, at the same instant, a point be presented as before, it retires again, for the point discharges it. Take a pair of large brass scales, of two or more feet beam, the cords of the scales being silk. Suspend the beam by a packthread from the ceiling, so that the bottom of the scales may be about a foot from the floor; the scales will move round in a circle by the untwisting of the packthread. Set the iron punch on the end upon the floor, in such a place as that the scales may pass over it in making their circle; then electrify one scale, by applying the wire of a charged phial to it. As they move round, you see that scale draw nigher to the floor, and dip more when it comes over the punch; and if that be placed at a proper distance, the scale will snap and discharge its fire into it. But if a needle be stuck on the end of the punch, its point upwards, the scale, instead of drawing nigh to the punch, and snapping, discharges its fire silently through the point, and rises higher from the punch. Nay, even if the needle be placed upon the floor near the punch, its point upwards, the end of the punch, though so much higher than the needle, will not attract the scale and receive its fire, for the needle will get it and convey it away, before it comes nigh enough for the punch to act. And this is constantly observable in these experiments, that the greater quantity of electricity on the pasteboard tube, the far-

ther it strikes or discharges its fire, and the point likewise will draw it off at a still greater distance.

Now if the fire of electricity and that of lightning be the same, as I have endeavoured to show at large, in a former paper, this pasteboard tube and these scales may represent electrified clouds. If a tube of only ten feet long will strike and discharge its fire on the punch at two or three inches distance, an electrified cloud of perhaps 10,000 acres may strike and discharge on the earth at a proportionably greater distance. The horizontal motion of the scales over the floor, may represent the motion of the clouds over the earth; and the erect iron punch, a hill or high building; and then we see how electrified clouds passing over hills or high buildings at too great a height to strike, may be attracted lower till within their striking distance. And lastly, if a needle fixed on the punch with its point upright, or even on the floor below the punch, will draw the fire from the scale silently at a much greater than the striking distance, and so prevent its descending towards the punch; or if in its course it would have come nigh enough to strike, yet being first deprived of its fire it cannot, and the punch is thereby secured from the stroke; I say, if these things are so, may not the knowledge of this power of points be of use to mankind, in preserving houses, churches, ships, &c. from the stroke of lightning, by directing us to fix on the highest parts of those edifices, upright rods of iron made sharp as a needle, and gilt to prevent rusting, and from the foot of those rods a wire down the outside of the building into the ground, or down round one of the shrouds of a ship, and down her side till it reaches the water? Would not these pointed rods probably draw the electral fire silently out of a cloud before it came nigh enough to strike, and thereby secure us from that most sudden and terrible mischief?

21. To determine the question, whether the clouds that contain lightning are electrified or not, I would propose an experiment to be tried where it may be done conveniently. On the top of some high tower or steeple, place a kind of centry-box (as in *Fig.* 9) big enough to contain a man and an electrical stand. From the middle of the stand let an iron rod rise and pass bending out of the door, and then upright 20 or 30 feet, pointed very sharp at the end. If the electrical stand be kept clean and dry, a man standing on it, when such clouds are passing low, might be electrified and afford sparks, the rod drawing fire to him from a cloud. If any danger to the man should be apprehended (though I think there would be none) let him stand on the floor of his box, and now and then bring near to the rod the loop of a wire, that has one end fastened to the leads, he holding it by a wax handle; so the sparks, if the rod is electrified, will strike from the rod to the wire, and not affect him.

22. Before I leave this subject of lightning, I may mention some other similarities between the effects of that, and those of electricity. Lightning has often been known to strike people blind. A pigeon that we struck dead to appearance by the electrical shock, recovering life, drooped about the yard several days, eat nothing, though crumbs were thrown to it, but declined and died. We did not think of its being deprived of sight; but afterwards a pullet, struck dead in like manner, being recovered by repeatedly blowing into its lungs, when set down on the floor, ran headlong against the wall, and on examination appeared perfectly blind. Hence we concluded that the pigeon also had been absolutely blinded by the shock. The biggest animal we have yet killed, or tried to kill, with the electrical stroke, was a well grown pullet.

23. Reading in the ingenious Dr. Miles's account of the thunder-storm at Streatham, the effect of the lightning in stripping off all the paint that had covered a gilt moulding of a pannel of wainscot, without hurting the rest of the paint, I had a mind to lay a coat of paint over the filleting of gold on the cover of a book, and try the effects of a strong electrical flash sent through that gold from a charged sheet of glass. But having no paint at hand, I pasted a narrow strip of paper over it; and when dry, sent the flash through the gilding, by which the paper was torn off from end to end, with such force, that it was broke in several places, and in others brought away part of the grain of the Turkey-leather in which it was bound; and convinced me, that had it been painted, the paint would have been stripped off in the same manner with that on the wainscot at Streatham.

24. Lightning melts metals, and I hinted in my paper on that subject, that I suspected it to be a cold fusion; I do not mean a fusion by force of cold, but a fusion without heat.* We have also melted gold, silver, and copper, in small quantities, by the electrical flash. The manner is this: take leaf-gold, leaf-silver, or leaf-gilt copper, commonly called leaf-brass, or Dutch gold; cut off from the leaf long narrow strips, the breadth of a straw. Place one of these strips between two strips of smooth glass that are about the width of your finger. If one strip of gold, the length of the leaf, be not long enough for the glass, add another to the end of it, so that you may have a little part hanging out loose at each end of the glass. Bind the pieces of glass together from end to end with strong silk thread; then place it so as to be part of an electrical circuit, (the ends of gold hanging out being

* See the note in page 257.

of use to join with the other parts of the circuit) and send the flash through it, from a large electrified jar or sheet of glass. Then if your strips of glass remain whole, you will see that the gold is missing in several places, and instead of a metallic stain on both the glasses; the stains on the upper and under glass exactly similar in the minutest stroke, as may be seen by holding them to the light; the metal appeared to have been not only melted, but even vitrified, or otherwise so driven into the pores of the glass, as to be protected by it from the action of the strongest *aqua fortis*, or *aqua regia*. I send you enclosed two little pieces of glass with these metallic stains upon them, which cannot be removed without taking part of the glass with them. Sometimes the stain spreads a little wider than the breadth of the leaf, and looks brighter at the edge, as by inspecting closely you may observe in these. Sometimes the glass breaks to pieces; once the upper glass broke into a thousand pieces, looking like coarse salt. The pieces I send you were stained with Dutch gold. True gold makes a darker stain, somewhat reddish; silver, a greenish stain. We once took two pieces of thick looking-glass, as broad as a Gunter's scale, and six inches long; and placing leaf-gold between them, put them between two smoothly-plained pieces of wood, and fixed them tight in a bookbinder's small press; yet though they were so closely confined, the force of the electrical shock shivered the glass into many pieces. The gold was melted and stained into the glass, as usual. The circumstances of the breaking of the glass differ much in making the experiment, and sometimes it does not break at all: but this is constant, that the stains in the upper and under pieces are exact counterparts of each other. And though I have taken up the pieces of glass between my fingers immediately after this melting, I never could perceive the least warmth in them.

25. In one of my former papers, I mentioned, that gilding on a book, though at first it communicated the shock perfectly well, yet failed after a few experiments, which we could not account for. We have since found that one strong shock breaks the continuity of the gold in the filletting, and makes it look rather like dust of gold, abundance of its parts being broken and driven off; and it will seldom conduct above one strong shock. Perhaps this may be the reason: when there is not a perfect continuity in the circuit, the fire must leap over the vacancies; there is a certain distance which it is able to leap over according to its strength; if a number of small vacancies, though each be very minute, taken together exceed that distance, it cannot leap over them, and so the shock is prevented.

26. From the before-mentioned law of electricity, that points as they are more or less acute, draw on and throw off the electrical fluid with more or less power, and at greater or less distances, and in larger or smaller quantities in the same time we may see how to account for the situation of the leaf of gold suspended between two plates, the upper one continually electrified, the under one in a person's hand standing on the floor. When the upper plate is electrified, the leaf is attracted, and raised towards it, and would fly to that plate, were it not for its own points. The corner that happens to be uppermost when the leaf is rising, being a sharp point, from the extreme thinness of the gold, draws and receives at a distance a sufficient quantity of the electric fluid to give itself an electric atmosphere, by which its progress to the upper plate is stopped, and it begins to be repelled from that plate, and would be driven back to the under plate, but that its lowest corner is likewise a point, and throws off or discharges the overplus of the leaf's atmosphere, as fast as the upper corner draws it on. Were those two points perfectly equal in acuteness, the leaf would take place exactly in the middle space, for its weight is a trifle compared to the power acting on it: but it is generally nearest the unelectrified plate, because, when the leaf is offered to the electrified plate, at a distance, the sharpest point is commonly first affected and raised towards it; so *that* point, from its greater acuteness, receiving the fluid faster than its opposite can discharge it at equal distances, it retires from the electrified plate, and draws nearer to the unelectrified plate, till it comes to a distance where the discharge can be exactly equal to the receipt, the latter being lessened, and the former increased; and there it remains as long as the globe continues to supply fresh electrical matter. This will appear plain, when the difference of acuteness in the corners is made very great. Cut a piece of Dutch gold, (which is fittest for these experiments on account of its great strength) into the form of *Fig.* 10, the upper corner a right angle, the two next obtuse angles, and the lowest a very acute one; and bring this on your plate under the electrified plate, in such a manner as that the right-angled part may be first raised (which is done by covering the acute part with the hollow of your hand) and you will see this leaf take place much nearer to the upper than the under plate; because without being nearer, it cannot receive so fast at its right-angled point, as it can discharge at its acute one. Turn this leaf with the acute part uppermost, and then it takes place nearest the unelectrified plate; because, otherwise, it receives faster at its acute point, than it can discharge at its right-angled one. Thus the difference of distance is always proportioned to the difference of acuteness. Take care in

cutting your leaf, to leave no little ragged particles on the edges, which sometimes form points where you would not have them. You may make this figure so acute below, and blunt above, as to need no under plate, it discharging fast enough into the air. When it is made narrower, as the figure between the pricked lines, we call it the *golden fish*, from its manner of acting. For if you take it by the tail, and hold it at a foot or greater horizontal distance from the prime conductor, it will, when let go, fly to it with a brisk but wavering motion, like that of an eel through the water; it will then take place under the prime conductor, at perhaps a quarter or half an inch distance, and keep a continual shaking of its tail like a fish, so that it seems animated. Turn its tail towards the prime conductor, and then it flies to your finger, and seems to nibble it. And if you hold a plate under it at six or eight inches distance, and cease turning the globe when the electrical atmosphere of the conductor grows small, it will descend to the plate and swim back again several times with the same fish-like motion, greatly to the entertainment of spectators. By a little practice in blunting or sharpening the heads or tails of these figures, you may make them take place as desired, nearer or farther from the electrified plate.

27. It is said in section 8, of this paper, that all kinds of common matter are supposed not to attract the electrical fluid with equal strength; and that those called electrics *per se*, as glass, &c. attract and retain it strongest, and contain the greatest quantity. This latter position may seem a paradox to some, being contrary to the hitherto received opinion; and therefore I shall now endeavour to explain it.

28. In order to this, let it first be considered, *that we cannot by any means we are yet acquainted with, force the electrical fluid through glass.* I know it is commonly thought that it easily pervades glass; and the experiment of a feather suspended by a thread in a bottle hermetically sealed, yet moved by bringing a rubbed tube near the outside of the bottle is alleged to prove it. But, if the electrical fluid so easily pervades glass, how does the phial become *charged* (as we term it) when we hold it in our hands? Would not the fire, thrown in by the wire, pass through to our hands, and so escape into the floor? Would not the bottle in that case be left just as we found it, uncharged, as we know a metal bottle so attempted to be charged would be? Indeed, if there be the least crack, the minutest solution of continuity in the glass, though it remains so tight that nothing else we know of will pass, yet the extremely subtile electric fluid flies through such a crack with the greatest freedom, and such a bottle we know can never be charged: what then makes the difference between such a bottle and one that is sound, but this, that the fluid can pass through the one, and not through the other?*

29. It is true, there is an experiment that at first sight would be apt to satisfy a light observer, that the fire, thrown into the bottle by the wire, does really pass through the glass. It is this: place the bottle on a glass stand, under the prime conductor, suspend a bullet by a chain from the prime conductor, till it comes within a quarter of an inch right over the wire of the bottle; place your knuckle on the glass stand, at just the same distance from the coating of the bottle, as the bullet is from its wire. Now let the globe be turned, and you see a spark strike from the bullet to the wire of the bottle, and the same instant you see and feel an exactly equal spark striking from the coating on your knuckle, and so on, spark for spark. This looks as if the whole received by the bottle was again discharged from it. And yet the bottle by this means is charged!† And therefore the fire that thus leaves the bottle, though the same in quantity, cannot be the very same fire that entered at the wire, for if it were, the bottle would remain uncharged.

30. If the fire that so leaves the bottle be not the same that is thrown in through the wire, it must be fire that subsisted in the bottle (that is, in the glass of the bottle) before the operation began.

31. If so, there must be a great quantity in glass, because a great quantity is thus discharged, even from very thin glass.

32. That this electrical fluid or fire is strongly attracted by glass, we know from the quickness and violence with which it is resumed by the part that had been deprived of it, when there is an opportunity. And by this, that we cannot from a mass of glass draw a quantity of electric fire, or electrify the whole mass *minus*, as we can a mass of metal. We cannot lessen or increase its whole quantity, for the quantity it has it holds; and it has as much as it can hold. Its pores are filled with it as full as the mutual repellency of the particles will admit; and, what is already in, refuses, or strongly repels any additional quantity. Nor have we any way of moving the electrical fluid in glass, but one; that is, by covering part of the two surfaces of thin glass with non-electrics, and then throwing an additional quantity of this fluid on one surface, which spreading in the non-electric, and being bound by it to that surface, acts by its repelling force on the particles of the electrical fluid contained in the other surface, and drives them out of the glass into the non-electric on that side from whence they are discharged, and then

* See the first sixteen sections of the former paper, called *Further Experiments, &c.*

† See sect. 10, of *Further Experiments, &c.*

those added on the charged side can enter. But when this is done, there is no more in the glass, nor less than before, just as much having left it on one side as it received on the other.

33. I feel a want of terms here, and doubt much whether I shall be able to make this part intelligible. By the word *surface*, in this case, I do not mean mere length and breadth without thickness; but when I speak of the upper or under surface of a piece of glass, the outer or inner surface of the phial, I mean length, breadth, and half the thickness, and beg the favour of being so understood. Now I suppose, that glass in its first principles, and in the furnace, has no more of this electrical fluid than other common matter: that when it is blown, as it cools, and the particles of common fire leave it, its pores become a *vacuum:* that the component parts of glass are extremely small and fine, I guess from its never showing a rough face when it breaks, but always a polish; and from the smallness of its particles I suppose the pores between them must be exceedingly small, which is the reason that *aqua fortis*, nor any other *menstruum* we have, can enter to separate them and dissolve the substance; nor is any fluid we know of, fine enough to enter, except common fire, and the electric fluid. Now the departing fire, leaving a vacuum, as aforesaid, between these pores, which air nor water are fine enough to enter and fill, the electric fluid (which is every where ready in what we call the non-electrics, and in the non-electric mixtures that are in the air) is attracted in; yet does not become fixed with the substance of the glass, but subsists there as water in a porous stone, retained only by the attraction of the fixed parts, itself still loose and a fluid. But I suppose farther, that in the cooling of the glass, its texture becomes closest in the middle, and forms a kind of partition, in which the pores are so narrow, that the particles of the electrical fluid, which enter both surfaces at the same time, cannot go through, or pass and repass from one surface to the other, and so mix together; yet, though the particles of electric fluid, imbibed by each surface, cannot themselves pass through to those of the other, their repellency can, and by this means they act on one another. The particles of the electric fluid have a mutual repellency, but by the power of attraction in the glass they are condensed or forced nearer to each other. When the glass has received, and, by its attraction, forced closer together so much of this electric fluid, as that the power of attracting and condensing in the one, is equal to the power of expansion in the other, it can imbibe no more, and that remains its constant whole quantity; but each surface would receive more, if the repellency of what is in the opposite surface did not resist its entrance. The quantities of this fluid in each surface being equal, their repelling action on each other is equal; and therefore those of one surface cannot drive out those of the other; but, if a greater quantity is forced into one surface than the glass would naturally draw in, this increases the repelling power on that side, and overpowering the attraction on the other, drives out part of the fluid that had been imbibed by that surface, if there be any non-electric ready to receive it: such there is in all cases where glass is electrified to give a shock. The surface that has been thus emptied, by having its electrical fluid driven out, resumes again an equal quantity with violence, as soon as the glass has an opportunity to discharge that over quantity more than it could retain by attraction in its other surface, by the additional repellency of which the *vacuum* had been occasioned. For experiments favouring (if I may not say confirming) this hypothesis, I must, to avoid repetition, beg leave to refer you back to what is said of the electrical phial in my former pages.

33. Let us now see how it will account for several other appearances.—Glass, a body extremely elastic, (and perhaps its elasticity may be owing in some degree to the subsisting of so great a quantity of this repelling fluid in its pores) must, when rubbed, have its rubbed surface somewhat stretched, or its solid parts drawn a little farther asunder, so that the vacancies in which the electrical fluid resides, become larger, affording room for more of that fluid, which is immediately attracted into it from the cushion or hand rubbing, they being supplied from the common stock. But the instant the parts of the glass so opened and filled, have passed the friction, they close again, and force the additional quantity out upon the surface, where it must rest till that part comes round to the cushion again, unless some non-electric (as the prime conductor,) first presents to receive it.* But if the inside of the globe be lined with a non-electric, the additional repellency of the electrical fluid, thus collected by friction on the rubbed part of the globe's outer surface, drives an equal quantity out of the inner surface into that non-electric lining, which receiving it, and carrying it away from the rubbed part into the common mass, through the axis of the globe, and frame of the machine, the new collected electrical fluid can enter and remain in the outer surface, and none of it (or a very little) will be received by the prime conductor. As this charged part of the globe comes round to

* In the dark the electric fluid may be seen on the cushion in two semi-circles or half-moons, one on the fore part, the other on the back part of the cushions just where the globe and cushion separate. In the fore crescent the fire is passing out of the cushion into the glass; in the other it is leaving the glass, and returning into the back part of the cushion. When the prime conductor is applied to take it off the glass, the back crescent disappears.

the cushion again, the outer surface delivers its overplus fire into the cushion, the opposite inner surface receiving at the same time an equal quantity from the floor. Every electrician knows that a globe wet within will afford little or no fire, but the reason has not before been attempted to be given, that I know of.

34. So if a tube lined with a non-electric be rubbed* little or no fire is obtained from it; what is collected from the hand, in the downward rubbing stroke, entering the pores of the glass, and driving an equal quantity out of the inner surface into the non-electric lining: and the hand in passing up to take a second stroke, takes out again what had been thrown into the outer surface, and then the inner surface receives back again what it had given to the non-electric lining. Thus the particles of electral fluid belonging to the inside surface go in and out of their pores every stroke given to the tube. Put a wire into the tube, the inward end in contact with the non-electric lining, so it will represent the Leyden bottle. Let a second person touch the wire, while you rub, and the fire driven out of the inward surface when you give the stroke, will pass through him into the common mass, and return through him when the inner surface resumes its quantity, and therefore this new kind of Leyden bottle cannot be so charged. But thus it may: after every stroke, before you pass your hand up to make another, let a second person apply his finger to the wire, take the spark, and then withdraw his finger; and so on till he has drawn a number of sparks; thus will the inner surface be exhausted, and the outer surface charged; then wrap a sheet of gilt paper close round the outer surface, and grasping it in your hand you may receive a shock by applying the finger of the other hand to the wire: for now the vacant pores in the inner surface resume their quantity, and the overcharged pores in the outer surface discharge that overplus; the equilibrium being restored through your body, which could not be restored through the glass.† If the tube be exhausted of air, a non-electric lining, in contact with the wire, is not necessary, for *in vacuo* the electrical fire will fly freely from the inner surface, without a non-electric conductor; but air resists in motion; for being itself an electric *per se*, it does not attract it, having already its quantity. So the air never draws off an electric atmosphere from any body, but in proportion to the non-electrics mixed with it: it rather keeps such an atmosphere confined, which, from the mutual repulsion of its particles, tends to dissipation, and would immediately dissipate *in vacuo*.—And thus the experiment of the feather enclosed in a glass vessel hermetically sealed, but moving on the approach of the rubbed tube, is explained. When an additional quantity of the electrical fluid is applied to the side of the vessel by the atmosphere of the tube, a quantity is repelled and driven out of the inner surface of that side into the vessel, and there affects the feather, returning again into its pores, when the tube with its atmosphere is withdrawn; not that the particles of that atmosphere did themselves pass through the glass to the feather. And every other appearance I have yet seen, in which glass and electricity are concerned, are, I think, explained with equal ease by the same hypothesis. Yet, perhaps, it may not be a true one, and I shall be obliged to him that affords me a better.

35. Thus I take the difference between non-electrics, and glass, an electric *per se*, to consist in these two particulars. 1st, That a non-electric easily suffers a change in the quantity of the electric fluid it contains. You may lessen its whole quantity, by drawing out a spark, which the whole body will again resume: but of glass you can only lessen the quantity contained in one of its surfaces; and not that, but by supplying an equal quantity at the same time to the other surface: so that the whole glass may always have the same quantity in the two surfaces, their two different quantities being added together. And this can only be done in glass that is thin; beyond a certain thickness we have yet no power that can make this change. And, 2dly, that the electric fire freely removes from place to place, in and through the substance of a non-electric, but not so through the substance of glass. If you offer a quantity to one end of a long rod of metal, it receives it, and when it enters, every particle that was before in the rod pushes its neighbour quite to the further end, where the overplus is discharged; and this instantaneously where the rod is part of the circle in the experiment of the shock. But glass, from the smallness of its pores, or stronger attraction of what it contains, refuses to admit so free a motion: a glass rod will not conduct a shock, nor will the thinnest glass suffer any particle entering one of its surfaces to pass through to the other.

36. Hence we see the impossibility of success in the experiments proposed, to draw out the effluvial virtues of a non-electric, as cinnamon, for instance, and mixing them with the electric fluid, to convey them with that into the body, by including it in the globe, and then applying friction, &c. For though the effluvia of cinnamon, and the electric fluid should mix within the globe, they would never come out together through the pores of the glass, and so go to the prime conductor, for the electric fluid itself cannot come through; and the prime conductor is always

* Gilt paper, with the gilt face next the glass, does well.

† See *Further Experiments*, sect. 15.

supplied from the cushion, and that from the floor. And besides, when the globe is filled with cinnamon, or other non-electric, non-electric fluid can be obtained from its outer surface, for the reason before-mentioned. I have tried another way, which I thought more likely to obtain a mixture of the electric and other effluvia together, if such a mixture had been possible. I placed a glass plate under my cushion, to cut off the communication between the cushion and floor; then brought a small chain from the cushion into a glass of oil of turpentine, and carried another chain from the oil of turpentine to the floor, taking care that the chain from the cushion to the glass, touched no part of the frame of the machine. Another chain was fixed to the prime conductor, and held in the hand of a person to be electrified. The ends of the two chains in the glass were near an inch distant from each other, the oil of turpentine between.—Now the globe being turned could draw no fire from the floor through the machine, communication that way being cut off by the thick glass plate under the cushion: it must then draw it through the chains whose ends were dipped in the oil of turpentine. And as the oil of turpentine, being an electric *per se*, would not conduct, what came up from the floor was obliged to jump from the end of one chain to the end of the other, through the substance of that oil, which we could see in large sparks, and so it had a fair opportunity of seizing some of the finest particles of the oil in its passage, and carrying them off with it: but no such effect followed, nor could I perceive the least difference in the smell of the electric effluvia thus collected, from what it has when collected otherwise, nor does it otherwise affect the body of a person electrised. I likewise put into a phial, instead of water, a strong purgative liquid, and then charged the phial, and took repeated shocks from it, in which case every particle of the electrical fluid must, before it went through my body, have first gone through the liquid when the phial is charging, and returned through it when discharging, yet no other effect followed than if it had been charged with water. I have also smelt the electric fire when drawn through gold, silver, copper, lead, iron, wood, and the human body, and could perceive no difference: the odour is always the same, where the spark does not burn what it strikes; and therefore I imagine it does not take that smell from any quality of the bodies it passes through. And indeed, as that smell so readily leaves the electric matter, and adheres to the knuckle receiving the sparks, and to other things; I suspect that it never was connected with it, but arises instantaneously from something in the air acted upon by it. For if it was fine enough to come with the electric fluid through the body of one person, why should it stop on the skin of another?

But I shall never have done, if I tell you all my conjectures, thoughts, and imaginations on the nature and operations of this electric fluid, and relate the variety of little experiments we have tried. I have already made this paper too long, for which I must crave pardon, not having now time to abridge it. I shall only add, that as it has been observed here that spirits will fire by the electric spark in the summer time, without heating them, when Fahrenheit's thermometer is above 70; so when colder, if the operator puts a small flat bottle of spirits in his bosom, or a close pocket, with the spoon, some little time before he uses them, the heat of his body will communicate warmth more than sufficient for the purpose.

Additional Experiments:

Proving that the Leyden Bottle has no more electrical fire in it when charged, than before: nor less when discharged: that, in discharging, the Fire does not issue from the Wire and the Coating at the same time, as some have thought, but that the Coating always receives what is discharged by the Wire, or an equal quantity; the other Surface being always in a negative state of Electricity, when the inner Surface is in a positive state.

Place a thick plate of glass under the rubbing cushion, to cut off the communication of electrical fire from the floor to the cushion, then if there be no fine points or hairy threads sticking out from the cushion, (of which you must be careful) you can get but a few sparks from the prime conductor, which are all the cushion will part with.

Hang a phial then on the prime conductor, and it will not charge though you hold it by the coating.—But,

Form a communication by a chain from the coating to the cushion, and the phial will charge.

For the globe then draws the electric fire out of the outside surface of the phial, and forces it through the prime conductor and wire of the phial into the inside surface.

Thus the bottle is charged with its own fire, no other being to be had while the glass plate is under the cushion.

Hang two cork balls by flaxen threads to the prime conductor; then touch the coating of the bottle, and they will be electrified and recede from each other.

For just as much fire as you give the coating, so much is discharged through the wire upon the prime conductor, whence the cork balls receive an electrical atmosphere.—But,

Take a wire bent in the form of a C, with a stick of wax fixed to the outside of the curve, to hold it by; and apply one end of

this wire to the coating, and the other at the same time to the prime conductor, the phial will be discharged; and if the balls are not electrified before the discharge, neither will they appear to be so after the discharge, for they will not repel each other.

If the phial really exploded at both ends, and discharged fire from both coating and wire, the balls would be *more* electrified, and recede *farther*; for none of the fire can escape, the wax handle preventing.

But if the fire with which the inside surface is surcharged be so much precisely as is wanted by the outside surface, it will pass round through the wire fixed to the wax handle, restore the equilibrium in the glass, and make no alteration in the state of the prime conductor.

Accordingly we find, that if the prime conductor be electrified, and the cork balls in a state of repellency before the bottle is discharged, they continue so afterwards. If not, they are not electrified by that discharge.

To Peter Collinson, London.

Accumulation of the electrical Fire proved to be in the electrified Glass.—Effect of Lightning on the Needle of Compasses, explained.—Gunpowder fired by the electric Flame.

PHILADELPHIA, July 27, 1750.

MR. WATSON, I believe, wrote his Observations on my last paper in haste, without having first well considered the experiments related § 17,* which still appear to me decisive in the question,—*Whether the accumulation of the electrical fire be in the electrical glass, or in the non-electric matter connected with the glass?* and to demonstrate that it is really in the glass.

As to the experiment that ingenious gentleman mentions, and which he thinks conclusive on the other side, I persuade myself he will change his opinion of it, when he considers, that as one person applying the wire of the charged bottle to warm spirits, in a spoon held by another person, both standing on the floor, will fire the spirits, and yet such firing will not determine whether the accumulation was in the glass or the non-electric; so the placing another person between them, standing on wax, with a bason in his hand, into which the water from the phial is poured, *while he at the instant of pouring* presents a finger of his other hand to the spirits, does not at all alter the case; the stream from the phial, the side of the bason, with the arms and body of the person on the wax, being all together but as one long wire, reaching from the internal surface of the phial to the spirits.

June 29, 1751. In capt. Waddell's account of the effects of lightning on his ship, I could not but take notice of the large comazants (as he calls them) that settled on the spintles at the top-mast heads, and burnt like very large torches (before the stroke.) According to my opinion, the electrical fire was then drawing off, as by points, from the cloud; the largeness of the flame betokening the great quantity of electricity in the cloud: and had there been a good wire communication from the spintle heads to the sea, that could have conducted more freely than tarred ropes, or mats of turpentine wood, I imagine there would either have been no stroke, or, if a stroke, the wire would have conducted it all into the sea without damage to the ship.

His compasses lost the virtue of the loadstone, or the poles were reversed; the north point turning to the south.—By electricity we have (*here* at *Philadelphia*) frequently given polarity to needles, and reversed it at pleasure. Mr. Wilson, at London, tried it on too large masses, and with too small force.

A shock from four large glass jars, sent through a fine sewing-needle, gives it polarity, and it will traverse when laid on water. —If the needle, when struck, lies east and west, the end entered by the electric blast points north.—If it lies north and south, the end that lay towards the north will continue to point north when placed on water, whether the fire entered at that end, or at the contrary end.

The polarity given is strongest when the needle is struck lying north and south, weakest when lying east and west; perhaps if the force was still greater, the south end, entered by the fire (when the needle lies north and south) might become the north, otherwise it puzzles us to account for the inverting of compasses by lightning; since their needles must always be found in that situation, and by our little experiments, whether the blast entered the north and went out at the south end of the needle, or the contrary, still the end that lay to the north should continue to point north.

In these experiments the ends of the needles are sometimes finely blued like a watch-spring by the electric flame.—This colour given by the flash from two jars only, will wipe off, but four jars fix it, and frequently melt the needles. I send you some that have had their heads and points melted off by our mimic lightning; and a pin that had its point melted off, and some part of its head and neck run. Sometimes the surface on the body of the needle is also run, and appears blistered when examined by a magnifying glass: the jars I make use of hold seven or eight gallons, and are coated and lined with tin-foil; each of them takes a thousand turns* of a globe nine inches diameter to charge it.

* See the paper entitled, *Further Experiments, &c.*

* The cushion being afterwards covered with a long flap of buckskin, which might cling to the globe; and

I send you two specimens of tin-foil melted between glass, by the force of two jars only.

I have not heard that any of your European electricians have ever been able to fire gunpowder by the electric flame. We do it here in this manner:—A small cartridge is filled with dry powder, hard rammed, so as to bruise some of the grains; two pointed wires are then thrust in, one at each end, the points approaching each other in the middle of the cartridge, till within the distance of half an inch; then, the cartridge being placed in circuit, when the four jars are discharged, the electric flame leaping from the point of one wire to the point of the other, within the cartridge amongst the powder, *fires it*, and the explosion of the powder is at the same instant with the crack of the discharge.

B. FRANKLIN.

To Cadwallader Colden, at New York, communicated to Mr. Collinson.*

Unlimited Nature of the Electric Force.

PHILADELPHIA, 1751.

I ENCLOSE you answers, such as my present hurry of business will permit me to make, to the principal queries contained in yours of the 28th instant, and beg leave to refer you to the latter piece in the printed collection of my papers, for farther explanation of the difference between what is called *electrics per se*, and *non-electrics*. When you have had time to read and consider these papers, I will endeavour to make any new experiments you shall propose, that you think may afford farther light or satisfaction to either of us; and shall be much obliged to you for such remarks, objections, &c. as may occur to you.—I forget whether I wrote to you that I have melted brass pins and steel needles, inverted the poles of the magnetic needle, given a magnetism and polarity to needles that had none, and fired dry gunpowder by the electric spark. I have five bottles that contain eight or nine gallons each, two of which charged are sufficient for those purposes; but I can charge and discharge them altogether. There are no bounds (but what expense and labour give) to the force man may raise and use in the electrical way; for bottle may be added to bottle *in infinitum*, and all united and discharged together as one, the force and effect proportioned to their number and size. The greatest known effects of common lightning may, I think, without much difficulty, be exceeded in this way, which a few years since could not have been believed, and even now may seem to many a little extravagant to suppose.—So we are not got beyond the skill of Rabelais's devils of two years old, who, he humourously says, had only learnt to thunder and lighten a little round the head of a cabbage.

B. FRANKLIN.

Queries and Answers referred to in the foregoing Letter.

The terms, electric per se, and non-electric, improper.—New relation between Metals and Water.—Effects of Air in electrical Experiments.—Experiments for discovering more of the Qualities of the electric Fluid.

Query. WHEREIN consists the difference between an *electric* and a *non-electric* body?

Answer. The terms electric *per se*, and non-electric, were first used to distinguish bodies, on a mistaken supposition that those called electrics *per se*, alone contained electric matter in their substance, which was capable of being excited by friction, and of being produced or drawn from them, and communicated to those called non-electrics, supposed to be destitute of it: for the glass, &c. being rubbed, discovered signs of having it, by snapping to the finger, attracting, repelling, &c. and could communicate those signs to metals and water. —Afterwards it was found, that rubbing of glass would not produce the electric matter, unless a communication was preserved between the rubber and the floor; and subsequent experiments proved that the electric matter was really drawn from those bodies that at first were thought to have none in them. Then it was doubted whether glass, and other bodies called *electrics per se*, had really any electric matter in them, since they apparently afforded none but what they first extracted from those which had been called non-electrics. But some of my experiments show, that glass contains it in great quantity, and I now suspect it to be pretty equally diffused in all the matter of this terraqueous globe. If so, the terms *electric per se*, and *non-electric*, should be laid aside as improper: and (the only difference being this, that some bodies will conduct electric matter, and others will not) the terms *conductor* and *non-conductor* may supply their place. If any portion of electric matter is applied to a piece of conducting matter, it penetrates and flows through it, or spreads equally on its surface; if applied to a piece of non-conducting matter, it will do neither. Perfect conductors of electric matter are only metals and water. Other bodies conducting only as they contain a mixture of those; without more or less of which they will not conduct at all.* This

care being taken to keep that flap of a due temperature, between too dry and too moist, we found so much more of the electric fluid was obtained, as that 150 turns were sufficient.—1753.

* This gentleman was afterwards lieutenant-governor of New York.

* This proposition is since found to be too general; Mr. Wilson having discovered that melted wax and rosin will also conduct.

(by the way) shows a new relation between metals and water heretofore unknown.

To illustrate this by a comparison, which, however, can only give a faint resemblance. Electric matter passes through conductors as water passes through a porous stone, or spreads on their surfaces as water spreads on a wet stone; but when applied to non-conductors, it is like water dropt on a greasy stone, it neither penetrates, passes through, nor spreads on the surface, but remains in drops where it falls. See farther on this head, in my last printed piece, entitled, *Opinions and Conjectures, &c.* 1749.

Query. What are the effects of air in electrical experiments?

Answer. All I have hitherto observed are these. Moist air receives and conducts the electrical matter in proportion to its moisture, quite dry air not at all: air is therefore to be classed with the non-conductors. Dry air assists in confining the electrical atmosphere to the body it surrounds, and prevents its dissipating; for *in vacuo* it quits easily, and points operate stronger, *i. e.* they throw off or attract the electrical matter more freely, and at greater distances; so that air intervening obstructs its passage from body to body in some degree. A clean electrical phial and wire, containing air instead of water, will not be charged nor give a shock, any more than if it was filled with powder of glass; but exhausted of air, it operates as well as if filled with water. Yet an electric atmosphere and air do not seem to exclude each other, for we breathe freely in such an atmosphere, and dry air will blow through it without displacing or driving it away. I question whether the strongest dry north-wester * would dissipate it. I once electrified a large cork-ball at the end of a silk thread three feet long, the other end of which I held in my fingers, and whirl'd it round, like a sling one hundred times in the air, with the swiftest motion I could possibly give it, yet it retained its electric atmosphere, though it must have passed through eight hundred yards of air, allowing my arm in giving the motion to add a foot to the semidiamater of the circle.—By quite dry air, I mean the dryest we have: for perhaps we never have any perfectly free from moisture. An electrical atmosphere raised round a thick wire, inserted in a phial of air, drives out none of the air, nor on withdrawing that atmosphere will any rush in, as I have found by a curious experiment† accurately made, whence we concluded that the air's elasticity was not affected thereby.

An experiment towards discovering more of the qualities of the electrical fluid.

From the prime conductor, hang a bullet by a wire hook; under the bullet, at half an inch distance, place a bright piece of silver to receive the sparks; then let the wheel be turned, and in a few minutes, (if the repeated sparks continually strike in the same spot) the silver will receive a blue stain, nearly the colour of a watch-spring.

A bright piece of iron will also be spotted, but not with that colour; it rather seems corroded.

On gold, brass, or tin, I have not perceived it makes any impression. But the spots on the silver or iron will be the same, whether the bullet be lead, brass, gold, or silver.

On a silver bullet there will also appear a small spot, as well as on the plate below it.

Cadwallader Colden, New York.

Mistake, that only Metals and Waters were conductors, rectified.—Supposition of a region of electric fire above our atmosphere.—Theorem concerning Light.—Poke-weed a cure for Cancers.—Read at the Royal Society, of London, Nov. 11, 1756.

Philadelphia, April 23, 1752.

In considering your favour of the 16th past, I recollected my having wrote you answers to some queries concerning the difference between electrics *per se*, and non-electrics, and the effects of air in electrical experiments, which, I apprehend, you may not have received. The date I have forgotten.

We have been used to call those bodies electrics *per se*, which would not conduct the electric fluid; we once imagined that only such bodies contained that fluid; afterwards that they had none of it, and only educed it from other bodies: but further experiments showed our mistake. It is to be found in all matter we know of; and the distinctions of electrics *per se*, and non-electrics, should now be dropt as improper, and that of *conductors* and *non-conductors* assumed in its place, as I mentioned in those answers.

* The cold dry wind of North America.

† The experiment here mentioned was thus made. An empty phial was stopped with a cork. Through the cork passed a thick wire, as usual in the Leyden experiment, which wire almost reached the bottom. Through another part of the cork passed one leg of a small glass syphon, the other leg on the outside came down almost to the bottom of the phial. This phial was first held a short time in the hand, which, warming, and of course ratifying the air within, drove a small part of it out through the syphon. Then a little red ink in a tea-spoon was applied to the opening of the outer leg of the syphon; so that as the air within cooled, a little of the ink might rise in that leg. When the air within the bottle came to be of the same temperature of that without, the drop of red ink would rest in a certain part of the leg. But the warmth of a finger applied to the phial would cause that drop to descend, as the least outward coolness applied would make it ascend. When it had found its situation, and was at rest, the wire was electrified by a communication from the prime conductor. This was supposed to give an electric atmosphere to the wire within the bottle, which might likewise rarify the included air, and of course depress the drop of ink in the syphon. But no such effect followed.

I do not remember any experiment by which it appeared that high rectified spirit will not conduct; perhaps you have made such. This I know, that wax, rosin, brimstone, and even glass, commonly reputed electrics, *per se* will, when in a fluid state, conduct pretty well. Glass will do it when only red hot. So that my former position, that only metals and waters were conductors, and other bodies more or less such as they partook of metal or moisture, was too general.

Your conception of the electric fluid, that it is incomparably more subtle than air, is undoubtedly just. It pervades dense matter with the greatest ease; but it does not seem to mix or incorporate willingly with mere air, as it does with other matter. It will not quit common matter to join with air. Air obstructs, in some degree, its motion. An electric atmosphere cannot be communicated at so great a distance, through intervening air, as through a *vacuum*. Who knows then, but there may be as the ancients thought, a region of this fire above our atmosphere, prevented by our air, and its own too great distance for attraction, from joining our earth? Perhaps where the atmosphere is rarest, this fluid may be densest, and nearer the earth where the atmosphere grows denser, this fluid may be rarer; yet some of it be low enough to attach itself to our highest clouds, and thence they becoming electrified, may be attracted by, and descend towards the earth, and discharge their watery contents, together with that ethereal fire. Perhaps the *auroræ borealeſ* are currents of this fluid in its own region, above our atmosphere, becoming from their motion visible. There is no end to conjectures. As yet we are but novices in this branch of natural knowledge.

You mention several differences of salts in electrical experiments. Were they all equally dry? Salt is apt to acquire moisture from a moist air, and some sorts more than others. When perfectly dried by lying before a fire, or on a stove, none that I have tried will conduct any better than so much glass.

New flannel, if dry and warm, will draw the electric fluid from non-electrics, as well as that which has been worn.

I wish you had the convenience of trying the experiments you seem to have such expectations from, upon various kinds of spirits, salt, earth, &c. Frequently, in a variety of experiments, though we miss what we expected to find, yet something valuable turns out, something surprising, and instructing, though unthought of.

I thank you for communicating the illustration of the theorem concerning light. It is very curious. But I must own I am much in the *dark* about *light*. I am not satisfied with the doctrine that supposes particles of matter called light continually driven off from the sun's surface, with a swiftness so prodigious! Must not the smallest particle conceivable have, with such a motion, a force exceeding that of a twenty-four pounder, discharged from a cannon? Must not the sun diminish exceedingly by such a waste of matter; and the planets, instead of drawing nearer to him, as some have feared, recede to greater distances through the lessened attraction. Yet these particles, with this amazing motion, will not drive before them, or remove, the least or lightest dust they meet with: and the sun, for aught we know, continues of his ancient dimensions, and his attendants move in their ancient orbits.

May not all the phenomena of light be more conveniently solved, by supposing universal space filled with a subtle elastic fluid, which, when at rest, is not visible, but whose vibrations affect that fine sense in the eye, as those of air do the grosser organs of the ear! We do not, in the case of sound, imagine that any sonorous particles are thrown off from a bell, for instance, and fly in strait lines to the ear; why must we believe that luminous particles leave the sun and proceed to the eye! Some diamonds, if rubbed, shine in the dark, without losing any part of their matter. I can make an electrical spark as big as the flame of a candle, much brighter, and, therefore, visible further; yet this is without fuel; and I am persuaded, no part of the electric fluid flies off in such case to distant places, but all goes directly, and is to be found in the place to which I destine it. May not different degrees of the vibration of the above mentioned universal medium, occasion the appearance of different colours? I think the electric fluid is always the same; yet I find that weaker and stronger sparks differ in apparent colour, some white, blue, purple, red; the strongest, white; weak ones, red. Thus different degrees of vibration given to the air produce the seven different sounds in music, analagous to the seven colours, yet the medium; air, is the same.

If the sun is not wasted by expenditure of light, I can easily conceive that he shall otherwise always retain the same quantity of matter; though we should suppose him made of sulphur constantly flaming. The action of fire only *separates* the particles of matter, it does not *annihilate* them. Water, by heat raised into vapour, returns to the earth in rain; and if we could collect all the particles of burning matter that go off in smoke, perhaps they might, with the ashes, weigh as much as the body before it was fired: and if we could put them into the same position with regard to each other, the mass would be the same as before, and might be burnt over again. The chymists have analysed sulphur, and find it composed, in certain proportions, of oil, salt, and earth; and having, by the analysis, disco-

vered those proportions, they can, of those ingredients, make sulphur. So we have only to suppose, that the parts of the sun's sulphur, separated by fire, rise into his atmosphere, and there being freed from the immediate action of the fire, they collect into cloudy masses, and growing, by degrees, too heavy to be longer supported, they descend to the sun, and are burnt over again. Hence the spots appearing on his face, which are observed to diminish daily in size, their consuming edges being of particular brightness.

It is well we are not as poor Galileo was, subject to the inquisition for *philosophical heresy*. My whispers against the orthodox doctrine, in private letters, would be dangerous; but your writing and printing would be highly criminal. As it is, you must expect some censure, but one heretic will surely excuse another.

I am heartily glad to hear more instances of the success of the poke-weed, in the cure of that horrible evil to the human body, a cancer. You will deserve highly of mankind for the communication. But I find in Boston they are at a loss to know the right plant, some asserting that it is what they call *Mechoachan*, others other things. In one of their late papers it is publicly requested that a perfect description may be given of the plant, its places of growth, &c. I have mislaid the paper, or would send it to you. I thought you had described it pretty fully.*

B. FRANKLIN.

E. Kinnersley, at Boston, to Benjamin Franklin.

New Experiments.—Paradoxes inferred from them.—Difference in the Electricity of a Globe of Glass charged, and a Globe of Sulphur.—Difficulty of ascertaining which is positive and which negative.

February 3, 1752.

I HAVE the following experiments to communicate: I held in one hand a wire, which was fastened at the other end to the handle of a pump, in order to try whether the stroke from the prime conductor, through my arms, would be any greater than when conveyed only to the surface of the earth, but could discover no difference.

I placed the needle of a compass on the point of a long pin, and holding it in the atmosphere of the prime conductor, at the distance of about three inches, found it to whirl round like the flyers of a jack, with great rapidity.

I suspended with silk a cork ball, about the bigness of a pea, and presented to it rubbed amber, sealing-wax, and sulphur, by each of which it was strongly repelled; then I tried rubbed glass and china, and found that each of these would attract it, until it became electrified again, and then it would be repelled as at first; and while thus repelled by the rubbed glass or china, either of the others when rubbed would attract it. Then I electrified the ball, with the wire of a charged phial, and presented to it rubbed glass (the stopper of a decanter) and a china tea-cup, by which it was as strongly repelled as by the wire; but when I presented either of the other rubbed electrics, it would be strongly attracted, and when I electrified it by either of these, till it became repelled, it would be attracted by the wire of the phial, but be repelled by its coating.

These experiments surprised me very much, and have induced me to infer the following parodoxes.

1. If a glass globe be placed at one end of a prime conductor and a sulphur one at the other end, both being equally in good order, and in equal motion, not a spark of fire can be obtained from the conductor; but one globe will draw out, as fast as the other gives in.

2. If a phial be suspended on the conductor, with a chain from its coating to the table, and only one of the globes be made use of at a time, 20 turns of the wheel for instance, will charge it; after which, so many turns of the other wheel will discharge it; and as many more will charge it again.

3. The globes being both in motion, each having a separate conductor, with a phial suspended on one of them, and the chain of it fastened to the other, the phial will become charged; one globe charging positively, the other negatively.

4. The phial being thus charged, hang it in like manner on the other conductor; set both wheels a going again, and the same number of turns that charged it before, will now discharge it; and the same number repeated, will charge it again.

5. When each globe communicates with the same prime conductor, having a chain hanging from it to the table, one of them, when in motion (but which I cannot say) will draw fire up through the cushion, and discharge it through the chain; the other will draw it up through the chain, and discharge it through the cushion.

* As the poke-weed, though out of place, is introduced here, we shall translate and insert two extracts of letters from Dr. Franklin to M. Dubourg, the French translator of a small collection of his works, on the same subject.

"LONDON, March 27, 1773.

"I apprehend that our poke-weed is what the botanists term *phytolacca*. This plant bears berries as large as peas: the skin is black, but it contains a crimson juice. It is this juice, thickened by evaporation in the sun, which was employed. It caused great pain, but some persons were said to have been cured. I am not quite certain of the facts; all that I know is, that Dr. Colden had a good opinion of the remedy."

"LONDON, April 23, 1773.

"You will see by the annexed paper by Dr. Solander, that this herb, poke-weed, in which has been found a specific remedy for cancers, is the most common species of *phytolacca*. (*Phytolacca decandria* L.")

I should be glad if you would send to my house for my sulphur globe, and the cushion belonging to it, and make the trial; but must caution you not to use chalk on the cushion, some fine powdered sulphur will do better. If, as I expect, you should find the globes to charge the prime conductor differently, I hope you will be able to discover some method of determining which it is that charges positively.—I am, &c. E. KINNERSLEY.

B. Franklin to E. Kinnersley.

Probable Course of the different Attractions and Repulsions of the two electrified Globes mentioned in the two preceding Letters.

PHILADELPHIA, March 2, 1752.

I THANK you for the experiments communicated. I sent immediately for your brimstone globe, in order to make the trials you desired, but found it wanted centres, which I have not time now to supply; but the first leisure I will get it fitted for use, try the experiments, and acquaint you with the result.

In the mean time I suspect, that the different attractions and repulsions you observed, proceeded rather from the greater or smaller quantities of the fire you obtained from different bodies, than from its being of a different *kind*, or having a different *direction*. In haste, B. FRANKLIN.

B. Franklin to E. Kinnersley.

Reasons for supposing, that the glass Globe charges positively, and the Sulphur negatively. —Hint respecting a leather Globe for Experiments when travelling.

PHILADELPHIA, March 16, 1752.

SIR,—Having brought your brimstone globe to work, I tried one of the experiments you proposed, and was agreeably surprised to find, that the glass globe being at one end of the conductor, and the sulphur globe at the other end, both globes in motion, no spark could be obtained from the conductor, unless when one globe turned slower or was not in so good order as the other; and then the spark was only in proportion to the difference, so that turning equally, or turning that slowest which worked best, would again bring the conductor to afford no spark.

I found also, that the wire of a phial charged by the glass globe, attracted a cork ball that had touched the wire of a phial charged by the brimstone globe, and *vice versa*, so that the cork continued to play between the two phials, just as when one phial was charged through the wire, the other through the coating, by the glass globe alone. And two phials charged, the one by the brimstone globe, the other by the glass globe, would be both discharged by bringing their wires together, and shock the person holding the phials.

From these experiments one may be certain that your 2d, 3d, and 4th proposed experiments, would succeed exactly as you suppose, though I have not tried them, wanting time. I imagine it is the glass globe that charges positively, and the sulphur negatively, for these reasons: 1. Though the sulphur globe seems to work equally well with the glass one, yet it can never occasion so large and distant a spark between my knuckle and the conductor, when the sulphur one is working, as when the glass one is used; which, I suppose, is occasioned by this, that bodies of certain bigness cannot so easily part with a quantity of electrical fluid they have and hold attracted *within* their substance, as they can receive an additional quantity *upon* their surface by way of atmosphere. Therefore so much cannot be drawn *out* of the conductor, as can be thrown *on* it. 2. I observe that the stream or brush of fire, appearing at the end of a wire, connected with the conductor, is long, large, and much diverging, when the glass globe is used, and makes a snapping (or rattling) noise: but when the sulphur ono is used, it is short, small, and makes a hissing noise; and just the reverse of both happens, when you hold the same wire in your hand, and the globes are worked alternately: the brush is large, long, diverging, and snapping (or rattling) when the sulphur globe is turned; short, small, and hissing, when the glass globe is turned.—When the brush is long, large, and much diverging, the body to which it joins seems to me to be throwing the fire out; and when the contrary appears, it seems to be drinking in. 3. I observe, that when I hold my knuckle before the sulphur globe, while turning, the stream of fire between my knuckle and the globe seems to spread on its surface, as if it flowed from the finger; on the glass globe it is otherwise. 4. The cool wind (or what was called so) that we used to feel as coming from an electrified point, is, I think, more sensible when the glass globe is used, than when the sulphur one. But these are hasty thoughts. As to your fifth paradox, it must likewise be true, if the globes are alternately worked; but if worked together, the fire will neither come up nor go down by the chain, because one globe will drink it as fast as the other produces it.

I should be glad to know, whether the effects would be contrary if the glass globe is solid, and the sulphur globe is hollow; but I have no means at present of trying.

In your journeys, your glass globes meet with accidents, and sulphur ones are heavy and inconvenient.—*Query.* Would not a thin plane of brimstone, cast on a board, serve on occasion as a cushion, while a globe of leather stuffed (properly mounted) might receive the fire from the sulphur, and charge the conductor positively! Such a globe would be

.n no danger of breaking* I think I can conceive how it may be done; but have not time to add more than that I am,

B. FRANKLIN.

The early LETTERS *of Dr. Franklin on electricity having been translated into French, and printed at Paris; the Abbe Mazeas, in a letter to Dr. Stephen Hales, dated St. Germain, May* 20, 1752, *gives the following Account* (*printed in the Philosophical Transactions*) *of the Experiment made at Marly, in pursuance of that proposed by Dr. Franklin.*

THE Philadelphian experiments, that Mr. Collinson, a member of the Royal Society, was so kind as to communicate to the public, having been universally admired in France, the king desired to see them performed. Wherefore the duke d'Ayen offered his majesty his country-house at St. Germain, where M. de Lor, professor of experimental philosophy, should put those of Philadelphia in execution. His majesty saw them with great satisfaction, and greatly applauded Messieurs Franklin and Collinson. These applauses of his majesty having excited in Messieurs de Buffon, d'Alibard, and de Lor, a desire of verifying the conjectures of Mr. Franklin, upon the analogy of thunder and electricity, they prepared themselves for making the experiment.

M. d'Alibard chose for this purpose a garden situated at Marly, where he placed upon an electrical body a pointed bar of iron, of forty feet high. On the 10th of May, twenty minutes past two in the afternoon, a stormy cloud having passed over the place where the bar stood, those that were appointed to observe it, drew near, and attracted from it sparks of fire, perceiving the same* kind of commotions as in the common electrical experiments.

M. de Lor, sensible of the good success of this experiment, resolved to repeat it at his house in the Estrapade, at Paris. He raised a bar of iron ninety-nine feet high, placed upon a cake of rosin, two feet square, and three inches thick. On the 18th of May, between four and five in the afternoon, a stormy cloud having passed over the bar, where it remained half an hour, he drew sparks from the bar, like those from the gun barrel, when in the electrical experiments, the globe is only rubbed by the cushion, and they produced the same noise, the same fire, and the same crackling. They drew the strongest sparks at the distance of nine lines, while the rain, mingled with a little hail, fell from the cloud, without either thunder or lightning; this cloud being, according to all appearance, only the consequence of a storm, which happened elsewhere.—I am, with a profound respect, your most humble and obedient servant,

G. MAZEAS.

A more particular Account of the Circumstances and Success of this extraordinary Experiment was laid before the Royal Academy of Sciences at Paris, three days afterwards, in a Memorial by M. d'Alibard, viz.

Extrait d'un Memoire de M. D'Alibard. Lu a l'Academie Royale des Sciences, le 13 *Mai*, 1752.

"EN suivant la route que M. Franklin nous a tracée, j'ai obtenu une satisfaction complette. Voici les préparatifs, le procédé et le succès.

"1. J'ai fait faire à Marly-la-ville, située à six lieues de Paris au milieu d'une belle plaine dont le sol est fort élevé, une verge de fer ronde, d'environ un pouce de diametre, longue de 40 pieds, et fort pointue par son extrémité supérieure; pour lui ménager une pointe plus fine, je l'ai fait armer d'acier trempé et ensuite brunir, au défaut de dorure, pour la préserver de la rouille; outre cela, cette verge de fer est courbée vers son extrémité inférieure en deux coudes à angles aigus quoiqu'arrondis; le premier coude est éloigné de deux pieds du bout inférieur, et le second est en sens contraire à trois pieds du premier.

"2. J'ai fait planter dans un jardin trois grosses perches de 28 à 29 pieds, disposées en triangle, et éloignées les unes des autres d'environ huit pieds; deux de ces perches sont contre un mur, et la troisieme est au-dedans du jardin. Pour les affermir toutes ensemble, l'on a cloué sur chacune des entretoises à vingt pieds de hauteur; et comme le grand vent agitoit encore cette espéce de'difice, l'on a attaché au haut de chaque perche de longs cordages, qui tenant lieu d'aubans, répondent par le bas à de bons piquets fortement enfoncés en terre à plus de 20 pieds des perches.

"3. J'ai fait construire entre les deux perches voisines du mur, et adosser contre ce mur une petite guérite de bois capable de contenir un homme et une table.

"4. J'ait fait placer au milieu de la guérite une petite table d'environ un demi-pied de hauteur: et sur cette table j'ai fait dresser et affermir un tabouret electrique. Ce tabouret n'est autre chose qu'une petite planche quarrée, portée sur trois bouteilles à vin; il n'est fait de cette matiere que pour suppléer au defaut d'un gâteau de résine qui me manquoit.

* The discoveries of the late ingenious Mr. Symmer, on the positive and negative electricity produced by the mutual friction of white and black silk, &c. afford hints for further improvements to be made with this view.

"5. Tout étant ainsi préparé, j'ai fait elever perpendiculairement la verge de fer au milieu des trois perches, et je l'ai affermie en l'attachant à chacune des perches avec de forts cordons de soie par deux endroits seulement. Les premiers liens sont au haut des perches, environ trois pouces au-dessous de leurs extrémités, supérieures; les seconds vers la moitié de leur hauteur. Le bout inférieur de la verge de fer est solidement appuyé sur le milieu du tabouret électrique, où j'ai fait creuser un trou propre à le recevoir.

"6. Comme il étoit important de garantir de la pluie le tabouret et les cordons de soie, parce qu'ils laisseroient passer la matiéré électrique s'ils étoient mouillés, j'ai pris les précautions nécessaires pour en empêcher. C'est dans cette vue que j'ai mis mon tabouret sous la guérite, et que j'avois fait courber ma verge de fer à angles aigus; afin que l'eau qui pourroit couler le long de cette verge, ne pût arriver jusques sur le tabouret. C'est aussi dans le même dessein que j'ai fait clouer sur le haut et au milieu de mes perches, à trois pouces au-dessus des cordons de soie, des especes de boîtes formées de trois petites planches d'environ 15 pouces de long, qui couvrent par-dessus et par les côtés une pareille longueur des cordons de soie, sans les toucher.

"Il s'agissoit de faire, dans le tems de l'orage, deux observations sur cette verge de fer ainsi disposée; l'une étoit de remarquer à sa pointe une aigrette lumineuse, semblable à celle que l'on apperçoit à la pointe d'une aiguille, quand on l'oppose assez prés d'un corps actuellement électrisé; l'autre étoit de tirer de la verge de fer des étincelles, comme on en tire du canon de fusil dans les expériences électriques; et afin de se garantir des piquûres de ces étincelles, j'avois attaché le tenon d'un fil d'archal au cordon d'une longue fiole pour lui server de manche. . . .

"Le Mécredi 10 Mai, 1752, entre deux et trois heures après midi, le nommé Coiffier, ancien dragon, que j'avois chargé de faire les observations en mon absence, ayant entendu un coup de tonnerre assez fort, vole aussitôt à la machine, prend la fiole avec le fil d'archal, présente le tenon du fil à la verge, en voit sortir une petite étincelle brilliante, et en entend le pétillement; il tire une seconde étincelle plus forte que la premiere et avec plus de bruit! il appelle ses voisins, et envoie chercher M. le Prieur. Celuici accourt de toutes ses forces; les paroissiens voyant la précipitation de leur curé, s'imaginent que le pauvre Coiffier a été tué du tonnerre; l'allarme se répand dans le village; la grêle qui survient n'empêche point le troupeau de suivre son pasteur. Cet honnête ecclésiastique arrive près de la machine, et voyant qu'il n'y avoit point de danger, met luimême la main à l'œuvere et tire de fortes étincelles. La nuée d'orage et de grêle ne fut pas plus d'un quart-d'heure à passer au zénith de notre machine, et l'on n'entendit que ce seul coup de tonnerre. Sitôt que le nuage fut passé, et qu'on ne tira plus d'étincelles de la verge de fer, M. le Prieur de Marly fit partir le sieur Coiffier lui-même, pour m'apporter la lettre suivante, qu'il m'écrivit à la hâte.

Je vous annonce, Monsieur, ce que vous attendez: l'expérience est complette. Aujourd' hui à deux heures 20 minutes après midi, le tonnerre a grondé directement sur Marly; le coup a été assez fort. L'envie de vous obliger, et la curiosité m'ont tiré de mon fauteuil, où j'étois occupé à lire: je suis allé chez Coiffier, qui déja m'avoit dépêché un enfant que j'ai rencontré en chemin, pour me prier de venir; j'ai doublé le pas à travers un torrent de grêle. Arrivé à l'endroit où est placée la tringle coudée, j'ai présenté le fil d'archal, en avançant successivement vers la tringle, à un pouce et demi, ou environ; il est sorti de la tringle une petite colonne de fer bleuâtre sentant le soufre, qui venoit frapper avec une extrême vivacité le tenon du fil d'archal, et occasionnoit un bruit semblable à celui qu'on feroit en frappant sur la tringle avec une clef. J'ai répété l'expérience au moins six fois dans l'espace d'environ quatre minutes, en présence de plusieurs personnes, et chaque expérience que j'ai faite a duré l'espace d'un pater *et d'un* ave. *J'ai voulu continuer; l'action du feu s'est ralentie peu à peu; j'ai approché plus près, et n'ai plus tiré que quelques étincelles, et enfin rien n'a paru.*

Le coup de tonnerre qui a occasionné cet événément, n'a été suivi d'aucun autre; tout s'est terminé par une abondance de grêle. J'étois si occupé dans le moment de l'expérience de ce que voyois, qu'ayant été frappé au bras un peu au-dessus du coude, je ne puis dire si c'est en touchant au fil d'archal ou à la tringle: je ne me suis pas plaint du mal que m'avoit fait le coup dans le moment que je l'ai reçu; mais comme la douleur continuoit, de retour chez moi, j'ai découvert mon bras en présence de Coiffier, et nous avons apperçu une meurtrissure tournante autour du bras, samblable à celle que feroit un coup de fil d'archal, si j'en avois été frappé à nud. En revenant de chez Coiffier, j'ai rencontré M. le Vicaire, M. de Milly, et le maître d'école, à qui j'ai rapporté ce qui venoit d'arriver; ils se sont plaints tous les trois qu'ils sentoient une odeur de soufre qui les frappoit davantage à mesure qu'ils s'approchoient de moi: j'ai porté chez moi la même odeur, et mes domestiques s'en sont apperçus sans que je leur aye rien dit.

Voilà Monsieur, un récit fait à la hâte, mais naif et vrai j'atteste, et vous pouvez assurer que je suis prêt à rendre témoignage

de cet évènement dans toutes les occasions. Coiffier a été le premier qui a fait l'expérience et l'a répétée plusieurs fois; ce n'est qu' à l'occasion de ce qu'il a vu qu'il m'a envoyé prier de venir. S'il étoit besoin d'autres temoins que de lui et de moi, vous les trouveriez. Coiffier presse pour partir.

Je suis avec une respectueuse considération, Monsieur, votre, et. signé RAULET, *Prieur de Marly.* 10 *Mai*, 1752.

"On voit, par le détail de cette lettre, que le fait est assez bien constaté pour ne laisser aucun doute à ce sujet. Le porteur m'a assuré de vive voix qu'il avoit tiré pendant près d'un quart-d'heure avant que M. le Prieur arrivât, en présence de cinq ou six personnes, des étincelles plus fortes et plus bruyantes que celles dont il est parlé dans la lettre. Ces premieres personnes arrivant successivement, n'osient approcher qu'à 10 ou 12 pas de la machine; et à cette distance, malgré le plein soleil, ils voyoient les étincelles et entendoient le bruit. . . . . .

"Il résulte de toutes les expériences et observations que j'ai rapportées dans ce mémoire, et surtout de la derniere expérience faite à Marly-la-ville, que la matière du tonnerre est incontestablement la même que celle de l'électricité. L'idée qu'en a eue M. Franklin cesse d'être une conjecture: la voilà devenue une réalité, et j'ose croire que plus on approfondira tout ce qu'il a publié sur l'électricité, plus on reconnoîtra combien la physique lui est redevable pour cette partie."

Letter of Mr. W. Watson, F. R. S. to the Royal Society, concerning the Electrical Experiments in England upon Thunder-Clouds.—Read Dec. 1752. Trans. Vol. xlvii.

AFTER the communications, which we have received from several of our correspondents in different parts of the continent, acquainting us with the success of their experiments last summer, in endeavouring to extract the electricity from the atmosphere during a thunder-storm, in consequence of Mr. Franklin's hypothesis, it may be thought extraordinary, that no accounts have been yet laid before you of our success here from the same experiments. That no want of attention, therefore, may be attributed to those here, who have been hitherto conversant in these inquiries, I thought proper to apprize you, that, though several members of the Royal Society, as well as myself, did, upon the first advices from France, prepare and set up the necessary apparatus for this purpose, we were defeated in our expectations, from the uncommon coolness and dampness of the air here, during the whole summer. We had only at London one thunder-storm; viz. on July 20; and then the thunder was accompanied with rain; so that, by wetting the apparatus, the electricity was dissipated too soon to be perceived upon touching those parts of the apparatus, which served to conduct it. This, I say, in general prevented our verifying Mr. Franklin's hypothesis: but our worthy brother, Mr. Canton, was more fortunate, I take the liberty, therefore, of laying before you an extract of a letter, which I received from that gentleman, dated from Spital-square, July 21, 1752.

"I had yesterday, about five in the afternoon, an opportunity of trying Mr. Franklin's experiment of extracting the electrical fire from the clouds; and succeeded, by means of a tin tube, between three and four feet in length, fixed to the top of a glass, one of about eighteen inches. To the upper end of the tin tube, which was not so high as a stack of chimnies on the same house, I fastened three needles with some wire; and to the lower end was soldered a tin cover, to keep the rain from the glass tube, which was set upright in a block of wood. I attended this apparatus as soon after the thunder began as possible, but did not find it in the least electrified, till between the third and fourth clap; when applying my knuckle to the edge of the cover, I felt and heard an electrical spark; and approaching it a second time, I received the spark at the distance of about half an inch, and saw it distinctly. This I repeated four or five times in the space of a minute, but the sparks grew weaker and weaker; and in less than two minutes the tin tube did not appear to be electrified at all. The rain continued during the thunder, but was considerably abated at the time of making the experiment." Thus far Mr. Canton.

Mr. Wilson likewise of the Society, to whom we are much obliged for the trouble he has taken in these pursuits, had an opportunity of verifying Mr. Franklin's hypothesis. He informed me, by a letter from near Chelmsford, in Essex, dated August 12, 1752, that, on that day about noon, he perceived several electrical snaps, during, or rather at the end of a thunder-storm, from no other apparatus than an iron curtain rod, one end of which he put into the neck of a glass phial, and held this phial in his hand. To the other end of the iron he fastened three needles with some silk. This phial, supporting the rod, he held in one hand, and drew snap from the rod with a finger of his other. This experiment was not made upon any eminence, but in the garden of a gentleman, at whose house he then was.

Dr. Bevis observed, at Mr. Cave's, at St. John's Gate, nearly the same phenomena as Mr. Canton, of which an account has been already laid before the public.

Trifling as the effects here mentioned are, when compared with those which we have received from Paris and Berlin, they are the

only ones, that the last summer here has produced; and as they were made by persons worthy of credit, they tend to establish the authenticity of those transmitted from our correspondents.

I flatter myself, that this short account of these matters will not be disagreeable to you; and am, W. WATSON.*

Remarks on the Abbé Nollet's Letters to Benjamin Franklin, of Philadelphia, on electricity: by David Colden, of New York.

COLDENHAM, in New York, Dec. 4, 1753.

IN considering the Abbé Nollet's Letters to Mr. Franklin, I am obliged to pass by all the experiments which are made with, or in, bottles hermetically sealed, or exhausted of air; because, not being able to repeat the experiments, I could not second any thing which occurs to me thereon, by experimental proof. Wherefore, the first point wherein I can dare to give my opinion, is in the Abbé's 4th letter, where he undertakes to prove, that the electric matter passes from one surface to another through the entire thickness of the glass: he takes Mr. Franklin's experiment of the magical picture, and writes thus of it: "When you electrise a pane of glass coated on both sides with metal, it is evident that whatever is placed on the side opposite to that which receives the electricity from the conductor, receives also an evident electrical virtue." Which Mr. Franklin says, is that equal quantity of electric matter, driven out of this side, by what is received from the conductor on the other side; and which will continue to give an electrical virtue to any thing in contact with it, till it is entirely discharged of its electrical fire. To which the Abbé thus objects: "Tell me (says he,) I pray you, how much time is necessary for this pretended discharge? I can assure you, that after having maintained the electrisation for hours, this surface, which ought, as it seems to me, to be entirely discharged of its electrical matter, considering either the vast number of sparks that were drawn from it, or the time that this matter had been exposed to the action of the expulsive cause; this surface, I say, appeared rather better electrised thereby, and more proper to produce all the effects of an actual electric body."

The Abbé does not tell us what those effects were, *all* the effects I could never observe, and those that *are* to be observed can easily be accounted for, by supposing that side to be entirely destitute of electric matter. The most sensible effect of a body charged with electricity is, that when you present your finger to it, a spark will issue from it to your finger: now when a phial, prepared for the Leyden experiment, is hung to the gun-barrel or prime conductor, and you turn the globe in order to charge it; as soon as the electric matter is excited, you can observe a spark to issue from the external surface of the phial to your finger, which, Mr. Franklin says, is the natural electric matter of the glass driven out by that received by the inner surface from the conductor. If it be only drawn out by sparks, a vast number of them may be drawn; but if you take hold of the external surface with your hand, the phial will soon receive all the electric matter it is capable of, and the outside will then be entirely destitute of its electric matter, and no spark can be drawn from it by the finger: here then is a want of that effect, which all bodies charged with electricity have. Some of the effects of an electric body, which I suppose the Abbe has observed in the exterior surface of a charged phial, are, that all light bodies are attracted by it. This is an effect which I have constantly observed, but do not think that it proceeds from an attractive quality in the exterior surface of the phial, but in those light bodies themselves, which seem to be attracted by the phial. It is a constant observation, that when one body has a greater charge of electric matter in it than another (that is in proportion to the quantity they will hold) this body will attract that which has less: now, I suppose, and it is a part of Mr. Franklin's system, that all those light bodies which appear to be attracted, have more electric matter in them than the external surface of the phial has, wherefore they endeavour to attract the phial to them, which is too heavy to be moved by the small degree of force they exert, and yet being greater than their own weight, moves them to the phial. The following experiment will help the imagination in conceiving this. Suspend a cork ball, or a feather, by a silk thread, and electrise it; then bring this ball nigh to any fixed body, and it will appear to be attracted by that body, for it will fly to it: now, by the consent of electricians, the attractive cause is in the ball itself, and not in the fixed body to which it flies: this is a similar case with the apparent attraction of light bodies, to the external surface of a charged phial.

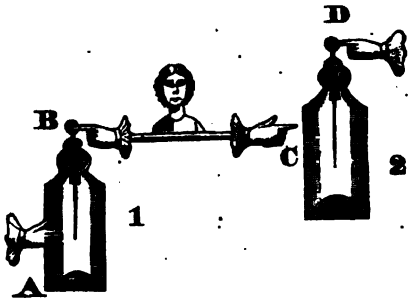
The Abbé says, "that he can electrise a hundred men, standing on wax, if they hold hands, and if one of them touch one of these surfaces (the exterior) with the end of his finger:" this I know he can, while the phial is charging, but after the phial is charged I am as certain he cannot: that is, hang a phial, prepared for the Leyden experiment, to the conductor, and let a man, standing on the floor, touch the coating with his finger, while the globe is turned, till the electric matter

* This is the sometime celebrated Watson, bishop of Landaff

spews out of the hook of the phial, or some part of the conductor, which I take to be the certainest sign that the phial has received all the electric matter it can: after this appears, let the man, who before stood on the floor, step on a cake of wax, where he may stand for hours, and the globe all that time turned, and yet have no appearance of being electrised. After the electric matter was spewed out as above from the hook of the phial prepared for the Leyden experiment, I hung another phial, in like manner prepared, to a hook fixed in the coating of the first, and held this other phial in my hand; now if there was any electric matter transmitted through the glass of the first phial, the second one would certainly receive and collect it; but having kept the phials in this situation for a considerable time, during which the globe was continually turned, I could not perceive that the second phial was in the least charged, for when I touched the hook with my finger, as in the Leyden experiment, I did not feel the least commotion, nor perceive any spark to issue from the hook.

I likewise made the following experiment: having charged two phials (prepared for the Leyden experiment) through their hooks; two persons took each one of these phials in his hand; one held his phial by the coating, the other by the hook, which he could do by removing the communication from the bottom before he took hold of the hook. These persons placed themselves one on each side of me, while I stood on a cake of wax, and took hold of the hook of that phial which was held by its coating (upon which a spark issued, but the phial was not discharged, as I stood on wax) keeping hold of the hook, I touched the coating of the phial that was held by its hook with my other hand, upon which there was a large spark to be seen between my finger and the coating, and both phials were instantly discharged. If the Abbé's opinion be right, that the exterior surface, communicating with the coating, is charged, as well as the interior, communicating with the hook; how can I, who stand on wax, discharge both these phials, when it is well known I could not discharge one of them singly? Nay, suppose I have drawn the electric matter from both of them, what becomes of it? For I appear to have no additional quantity in me when the experiment is over, and I have not stirred off the wax: wherefore this experiment fully convinces me, that the exterior surface is not charged; and not only so, but that it wants as much electric matter as the inner has of excess: for by this supposition, which is a part of Mr. Franklin's system, the above experiment is easily accounted for, as follows:

When I stand on wax, my body is not capable of receiving all the electric matter from the hook of one phial, which it is ready to give; neither can it give as much to the coating of the other phial as it is ready to take when one is only applied to me: but when both are applied, the coating takes from me what the hook gives: thus I receive the fire from the first phial at B, the exterior surface of which is supplied from the hand at A; I give the fire to the second phial at C, whose interior surface is discharged by the hand at D. This discharge at D may be made evident by receiving that fire into the hook of a third phial, which is done thus: in place of taking the hook of the second phial in your hand, run the wire of a third phial, prepared as for the Leyden experiment, through it, and hold this third phial in your hand, the second one hanging to it, by the ends of the hooks run through each other: when the experiment is performed, this third phial receives the fire at D, and will be charged.



When this experiment is considered, I think, it must fully prove that the exterior surface of a charged phial wants electric matter, while the inner surface has an excess of it. One thing more worthy of notice in this experiment is, that I feel no commotion or shock in my arms, though so great a quantity of electric matter passes them instantaneously. I only feel a pricking in the ends of my fingers. This makes me think the Abbé has mistook, when he says, that there is no difference between the shock felt in performing the Leyden experiment, and the pricking felt on drawing simple sparks, except that of greater to less. In the last experiment, as much electric matter went through my arms, as would have given me a very sensible shock, had there been an immediate communication, by my arms, from the hook to the coating of the same phial; because when it was taken into a third phial, and that phial discharged singly through my arms, it gave me a sensible shock. If these experiments prove that the electric matter does not pass through the entire thickness of the glass, it is a necessary consequence that it must always come out where it entered.

The next thing I meet with is in the Abbé's fifth letter, where he differs from Mr.

Franklin, who thinks that the whole power of giving a shock is in the glass itself, and not in the non-electrics in contact with it. The experiments which Mr. Franklin gave to prove this opinion, in his *Observations on the Leyden Bottle*,* convinced me that he was in the right; and what the Abbé has asserted, in contradiction thereto, has not made me think otherwise. The Abbé, perceiving as I suppose, that the experiments, as Mr. Franklin had performed them, must prove his assertion, alters them without giving any reason for it, and makes them in a manner that proves nothing. Why will he have the phial, into which the water is to be decanted from a charged phial, held in a man's hand? If the power of giving a shock is in the water contained in the phial, it should remain there though decanted into another phial, since no non-electric body touched it to take that power off. The phial being placed on wax is no objection, for it cannot take the power from the water, if it had any, but it is a necessary means to try the fact; whereas, that phial's being charged when held in a man's hand, only proves that water will conduct the electric matter. The Abbé owns, that he had heard this remarked, but says, why is not a conductor of electricity an electric subject? This is not the question; Mr. Franklin never said that water was not an electric subject; he said, that the power of giving a shock was in the glass, and not in the water; and this, his experiments fully prove; so fully, that it may appear impertinent to offer any more; yet as I do not know that the following has been taken notice of by any body before, my inserting of it in this place may be excused. It is this: hang a phial, prepared for the Leyden experiment, to the conductor, by its hook, and charge it; which done, remove the communication from the bottom of the phial: now the conductor shows evident signs of being electrised; for if a thread be tied round it, and its ends left about two inches long, they will extend themselves out like a pair of horns; but if you touch the conductor, a spark will issue from it, and the threads will fall, nor does the conductor show the least sign of being electrised after this is done. I think that by this touch, I have taken out all the charge of electric matter that was in the conductor, the hook of the phial, and water or filings of iron contained in it; which is no more than we see all non-electric bodies will receive: yet, the glass of the phial retains its power of giving a shock, as any one will find that pleases to try. This experiment fully evinces, that the water in the phial contains no more electric matter than it would do in an open bason, and has not any of that great quantity which produces the shock, and is only retained by the glass. If after the spark is drawn from the conductor, you touch the coating of the phial (which all this while is supposed to hang in the air, free from any non-electric body) the threads on the conductor will instantly start up, and show that the conductor is electrised. It receives this electrisation from the inner surface of the phial, which, when the outer surface can receive what it wants from the hand applied to it, will give as much as the bodies in contact with it can receive, or if they be large enough, all that it has of excess. It is diverting to see how the threads will rise and fall by touching the coating and conductor of the phial alternately. May it not be that the difference between the charged side of the glass, and the outer or emptied side, being lessened by touching the hook or the conductor; the outer side can receive from the hand which touched it, and by its receiving, the inner side cannot retain so much; and for that reason so much as it cannot contain electrises the water, or filings and conductor; for it seems to be a rule, that the one side must be emptied in the same proportion that the other is filled: though this from experiment appears evident, yet it is still a mystery not to be accounted for.

I am in many places of the Abbé's book surprised to find that experiments have succeeded so differently at Paris, from what they did with Mr. Franklin, and as I have always observed them to do. The Abbé, in making experiments to find the difference between the two surfaces of a charged glass, will not have the phial placed on wax: for, says he, dont you know that being placed on a body originally electric, it quickly loses its virtue? I cannot imagine what should have made the Abbé think so: it certainly is contradictory to the notions commonly received of electrics *per se*; and by experiment I find it entirely otherwise: for having several times left a charged phial, for that purpose, standing on wax for hours, I found it to retain as much of its charge as another that stood at the same time on a table. I left one standing on wax from ten o'clock at night till eight the next morning, when I found it retain a sufficient quantity of its charge, to give me a sensible commotion in my arms, though the room in which the phial stood had been swept in that time, which must have raised much dust to facilitate the discharge of the phial.

I find that a cork-ball suspended between two bottles, the one fully and the other but little charged, will not play between them, but is driven into a situation that makes a triangle with the hook of the phials: though the Abbé has asserted the contrary of this, in order to account for the playing of a cork-ball between the wire thrust into the phial, and one that rises up from its coating. The

* See pages 246 to 249, of this volume.

phial which is least charged must have more electric matter given to it, in proportion to its bulk, than the cork ball receives from the hook of the full phial.

The Abbé says, "That a piece of metal leaf hung to a silk thread and electrised, will be repelled by the bottom of a charged phial held by its hook in the air:" this I find constantly otherwise, it is with me always first attracted and then repelled: it is necessary, in charging the leaf, to be careful that it does not fly off to some non-electric body, and so discharge itself when you think it is charged; it is difficult to keep it from flying to your own wrist, or to some part of your body.

The Abbé says, "That it is not impossible, as Mr. Franklin says it is, to charge a phial while there is a communication formed between its coating and its hook." I have always found it impossible to charge such a phial so as to give a shock: indeed, if it hang on the conductor without a communication from it, you may draw a spark from it as you may from any body that hangs there, but this is very different from being charged in such a manner as to give a shock. The Abbé, in order to account for the little quantity of electric matter that is to be found in the phial, says, "that it rather follows the metal than the glass, and that it is spewed out into the air from the coating of the phial." I wonder how it comes not to do so too, when it sifts through the glass, and charges the exterior surface, according to the Abbé's system!

The Abbé's objection against Mr. Franklin's two last experiments, I think, have little weight in them: he seems, indeed, much at a loss what to say, wherefore he taxes Mr. Franklin with having concealed a material part of the experiment; a thing too mean for any gentleman to be charged with, who has not shown so great a partiality in relating experiments, as the Abbé has done.

To Dr. Pringle, London.

Relating a curious Instance of the Effect of Oil on Water.

PHILADELPHIA, Dec. 1, 1762.

DURING our passage to Madeira, the weather being warm, and the cabin windows constantly open, for the benefit of the air, the candles at night flared and run very much, which was an inconvenience. At Madeira we got oil to burn, and with a common glass tumbler or breaker, slung in wire, and suspended to the ceiling of the cabin, and a little wire hoop for the wick, furnished with corks to float on the oil, I made an Italian lamp, that gave us very good light all over the table.—The glass at bottom contained water to about one third of its height; another third was taken up with oil; the rest was left empty that the sides of the glass might protect the flame from the wind. There is nothing remarkable in all this; but what follows is particular. At supper, looking on the lamp, I remarked, that though the surface of the oil was perfectly tranquil, and duly preserved its position and distance with regard to the brim of the glass, the water under the oil was in great commotion, rising and falling in irregular waves, which continued during the whole evening. The lamp was kept burning as a watch light all night, till the oil was spent, and the water only remained. In the morning I observed, that though the motion of the ship continued the same, the water was now quiet, and its surface as tranquil as that of the oil had been the evening before. At night again, when oil was put upon it, the water resumed its irregular motions, rising in high waves almost to the surface of the oil, but without disturbing the smooth level of that surface. And this was repeated every day during the voyage.

Since my arrival in America, I have repeated the experiment frequently thus: I have put a packthread round a tumbler, with strings of the same, from each side meeting above it in a knot at about a foot distance from the top of the tumbler. Then putting in as much water as would fill about one third part of the tumbler, I lifted it up by the knot, and swung it to and fro in the air; when the water appeared to keep its place in the tumbler as steadily as if it had been ice. But pouring gently in upon the water about as much oil, and then again swinging it in the air as before, the tranquillity before possessed by the water, was transferred to the surface of the oil, and the water under it was agitated with the same commotions as at sea.

I have shown this experiment to a number of ingenious persons. Those who are but slightly acquainted with the principles of hydrostatics, &c. are apt to fancy immediately that they understand it, and readily attempt to explain it; but their explanations have been different, and to me not very intelligible. Others, more deeply skilled in those principles, seem to wonder at it, and promise to consider it. And I think it is worth considering; for a new appearance, if it cannot be explained by our old principles, may afford us new ones, of use perhaps in explaining some other obscure parts of natural knowledge.

B. FRANKLIN.

Dr. Brownrigg to Dr. Franklin.

Of the Stilling of Waves by means of Oil.—Extracted from sundry letters accompanying.—Read at the Royal Society, June 2, 1774.

ORNATHWAITE, January 27, 1773.

BY the enclosed from an old friend, a worthy clergyman at Carlisle, whose great learn

ing and extensive knowledge in most sciences would have more distinguished him, had he been placed in a more conspicuous point of view, you will find, that he had heard of your experiment on Derwent Lake, and has thrown together what he could collect on that subject; to which I have subjoined one experiment from the relation of another gentleman.

Rev. Mr. Farish to Dr. Brownrigg.

I SOME time ago met with Mr. Dun, who surprised me with an account of an experiment you had tried upon the Derwent water, in company with sir John Pringle and Dr. Franklin. According to his representation, the water, which had been in great agitation before, was instantly calmed upon pouring in only a very small quantity of oil, and that to so great a distance round the boat as seemed incredible. I have since had the same accounts from others, but I suspect all of a little exaggeration. Pliny mentions this property of oil as known particularly to the divers, who made use of it in his days, in order to have a more steady light at the bottom.* The sailors, I have been told, have observed something of the same kind in our days, that the water is always remarkably smoother, in the wake of a ship that has been newly tallowed, than it is in one that is foul. Mr. Pennant also mentions an observation of the like nature made by the seal catchers in Scotland. *Brit. Zool.* Vol. iv. *Article* Seal. When these animals are devouring a very oily fish, which they always do under water, the waves above are observed to be remarkably smooth, and by this mark the fishermen know where to look for them. Old Pliny does not usually meet with all the credit I am inclined to think he deserves. I shall be glad to have an authentic account of the Keswick experiment, and if it comes up to the representations that have been made of it, I shall not much hesitate to believe the old gentleman in another more wonderful phenomenon he relates of stilling a tempest only by throwing up a little vinegar into the air.

Dr. Franklin to Dr. Brownrigg.

LONDON, Nov. 7, 1773.

I THANK you for the remarks of your learned friend at Carlisle: I had, when a youth, read and smiled at Pliny's account of a practice among the seamen of his time, to still the waves in a storm by pouring oil into the sea which he mentions, as well as the use made of oil by the divers; but the stilling a tempest by throwing vinegar into the air had escaped me. I think with your friend, that it has been of late too much the mode to slight the learning of the ancients. The learned, too, are apt to slight too much the knowledge of the vulgar. The cooling by evaporation was long an instance of the latter. This art of smoothing the waves by oil is an instance of both.

Perhaps you may not dislike to have an account of all I have heard, and learnt, and done in this way. Take it if you please as follows:

In 1757, being at sea in a fleet of 96 sail bound against Louisburg, I observed the wakes of two of the ships to be remarkably smooth, while all the others were ruffled by the wind, which blew fresh. Being puzzled with the differing appearance, I at last pointed it out to our captain, and asked him the meaning of it. "The cooks," says he, "have, I suppose, been just emptying their greasy water through the scuppers, which has greased the sides of those ships a little;" and this answer he gave me with an air of some little contempt, as to a person ignorant of what every body else knew. In my own mind I at first slighted his solution, though I was not able to think of another, but recollecting what I had formerly read in Pliny, I resolved to make some experiment of the effect of oil on water, when I should have opportunity.

Afterwards being again at sea in 1762, I first observed the wonderful quietness of oil on agitated water, in the swinging glass lamp I made to hang up in the cabin, as described in my printed paper.* This I was continually looking at and considering, as an appearance to me inexplicable. An old sea captain, then a passenger with me, thought little of it, supposing it an effect of the same kind with that of oil put on water to smooth it, which he said was a practice of the Bermudians when they would strike fish, which they could not see if the surface of the water was ruffled by the wind. This practice I had never before heard of, and was obliged to him for the information; though I thought him mistaken as to the sameness of the experiment, the operations being different as well as the effects. In one case, the water is smooth till the oil is put on, and then becomes agitated. In the other it is agitated before the oil is applied, and then becomes smooth. The same gentleman told me, he had heard it was a practice with the fishermen of Lisbon when about to return into the river (if they saw before them too great a surf upon the bar, which they apprehended might fill their boats in passing) to empty a bottle or two of oil, into the sea, which would suppress the breakers, and allow them to pass safely. A

* *Note by Dr. Brownrigg.*—Sir Gilfred Lawson, who served long in the army at Gibraltar, assures me, that the fishermen in that place are accustomed to pour a little oil on the sea, in order to still its motion, that they may be enabled to see the oysters lying at its bottom, which are there very large, and which they take up with a proper instrument. This sir Gilfred had often seen there performed, and said the same was practised on other parts of the Spanish coast.

* See the preceding paper

confirmation of this I have not since had an opportunity of obtaining: but discoursing of it with another person, who had often been in the Mediterranean, I was informed, that the divers there, who, when under water in their business, need light, which the curling of the surface interrupts by the refractions of so many little waves, let a small quantity of oil now and then out of their mouths, which rising to the surface smooths it, and permits the light to come down to them. All these informations I at times revolved in my mind, and wondered to find no mention of them in our books of experimental philosophy.

At length being at Clapham, where there is, on the common, a large pond, which I observed one day to be very rough with the wind, I fetched out a cruet of oil, and dropt a little of it on the water. I saw it spread itself with surprising swiftness upon the surface; but the effect of smoothing the waves was not produced: for I had applied it first on the leeward side of the pond, where the waves were largest, and the wind drove my oil back upon the shore. I then went to the windward side where they began to form; and there the oil, though not more than a tea-spoonful, produced an instant calm over a space several yards square, which spread amazingly, and extended itself gradually till it reached the lee side, making all that quarter of the pond, perhaps half an acre, as smooth as a looking-glass.

After this I contrived to take with me, whenever I went into the country, a little oil in the upper hollow joint of my bamboo cane, with which I might repeat the experiment as opportunity should offer, and I found it constantly to succeed.

In these experiments, one circumstance struck me with particular surprise. This was the sudden, wide, and forcible spreading of a drop of oil on the face of the water, which I do not know that any body has hitherto considered. If a drop of oil is put on a highly polished marble table, or on a looking-glass that lies horizontally, the drop remains in its place, spreading very little. But when put on water, it spreads instantly many feet round, becoming so thin as to produce the prismatic colours, for a considerable space, and beyond them so much thinner as to be invisible, except in its effect of smoothing the waves at a much greater distance. It seems as if a mutual repulsion between its particles took place as soon as it touched the water, and a repulsion so strong as to act on other bodies swimming on the surface, as straw, leaves, chips, &c. forcing them to recede every way from the drop, as from a centre, leaving a large clear space. The quantity of this force, and the distance to which it will operate, I have not yet ascertained; but I think it is a curious inquiry, and I wish to understand whence it arises.

In our journey to the north, when we had the pleasure of seeing you at Ormathwaite, we visited the celebrated Mr. Smeaton, near Leeds. Being about to show him the smoothing experiment on a little pond near his house, an ingenious pupil of his, Mr. Jessop, then present, told us of an odd appearance on that pond, which had lately occurred to him. He was about to clean a little cup in which he kept oil, and he threw upon the water some flies that had been drowned in the oil. These flies presently began to move, and turn round on the water very rapidly, as if they were vigorously alive, though on examination he found they were not so. I immediately concluded that the motion was occasioned by the power of the repulsion above mentioned, and that the oil issuing gradually from the spungy body of the fly continued the motion. He found some more flies drowned in oil, with which the experiment was repeated before us. To show that it was not any effect of life recovered by the flies, I imitated it by little bits of oiled chips and paper cut in the form of a comma, of the size of a common fly; when the stream of repelling particles issuing from the point made the comma turn round the contrary way. This is not a chamber experiment; for it cannot be well repeated in a bowl or dish of water on a table. A considerable surface of water is necessary to give room for the expansion of a small quantity of oil. In a dish of water, if the smallest drop of oil be let fall in the middle, the whole surface is presently covered with a thin greasy film proceeding from the drop; but as soon as that film has reached the sides of the dish, no more will issue from the drop, but it remains in the form of oil, the side of the dish putting a stop to its dissipation by prohibiting the farther expansion of the film.

Our friend, sir John Pringle, being soon after in Scotland, learned there, that those employed in the herring fishery could at a distance see where the shoals of herrings were, by the smoothness of the water over them, which might possibly be occasioned, he thought, by some oiliness proceeding from their bodies.

A gentleman from Rhode Island told me, it had been remarked, that the harbour of Newport was ever smooth while any whaling vessels were in it: which probably arose from hence, that the blubber which they sometimes bring loose in the hold, or the leakage of their barrels, might afford some oil, to mix with that water, which from time to time they pump out to keep their vessel free, and that some oil might spread over the surface of the water in the harbour, and prevent the forming of any waves.

This prevention I would hus endeavour to explain.

There seems to be no natural repulsion between water and air, such as to keep them from coming into contact with each other.—Hence we find a quantity of air in water; and if we extract it by means of the air-pump the same water, again exposed to the air, will soon imbibe an equal quantity.

Therefore air in motion, which is wind, in passing over the smooth surface of water, may rub, as it were, upon that surface, and raise it into wrinkles, which if the wind continues, are the elements of future waves.

The smallest wave once raised does not immediately subside, and leave the neighbouring water quiet: but in subsiding raises nearly as much of the water next to it, the friction of the parts making little difference. Thus a stone dropped in a pool raises first a single wave round itself; and leaves it, by sinking to the bottom; but that first wave subsiding raises a second, the second a third, and so on in circles to a great extent.

A small power continually operating will produce a great action. A finger applied to a weighty suspended bell can at first move it but little; if repeatedly applied, though with no greater strength, the motion increases till the bell swings to its utmost height, and with a force that cannot be resisted by the whole strength of the arm and body. Thus the small first raised waves, being continually acted upon by the wind, are, though the wind does not increase in strength, continually increased in magnitude, rising highly and extending their bases, so as to include a vast mass of water in each wave, which in its motion acts with great violence.

But if there be a mutual repulsion between the particles of oil, and no attraction between oil and water, oil dropped on water will not be held together by adhesion to the spot whereon it falls; it will not be imbibed by the water; it will be at liberty to expand itself; and it will spread on a surface that, besides being smooth to the most perfect degree of polish, prevents, perhaps by repelling the oil, all immediate contact, keeping it at a minute distance from itself: and the expansion will continue till the mutual repulsion between the particles of the oil is weakened and reduced to nothing by their distance.

Now I imagine that the wind, blowing over water thus covered with a film of oil, cannot easily *catch* upon it, so as to raise the first wrinkles, but slides over it, and leaves it smooth as it finds it. It moves a little the oil indeed, which being between it and the water, serves it to slide with, and prevents friction, as oil does between those parts of a machine, that would otherwise rub hard together. Hence the oil dropped on the windward side of a pond proceeds gradually to leeward, as may be seen by the smoothness it carries with it, quite to the opposite side. For the wind being thus prevented from raising the first wrinkles, that I call the elements of waves, cannot produce waves, which are to be made by continually acting upon, and enlarging those elements, and thus the whole pond is calmed.

Totally therefore we might suppress the waves in any required place, if we could come at the windward place where they take their rise. This in the ocean can seldom if ever be done. But perhaps something may be done on particular occasions, to moderate the violence of the waves when we are in the midst of them, and prevent their breaking where that would be inconvenient.

For when the wind blows fresh, there are continually rising on the back of every great wave a number of small ones, which roughen its surface, and give the wind hold, as it were, to push it with greater force. This hold is diminished, by preventing the generation of those small ones. And possibly too, when a wave's surface is oiled, the wind in passing over it, may rather in some degree press it down, and contribute to prevent it rising again, instead of promoting it.

This as mere conjecture would have little weight, if the apparent effects of pouring oil into the midst of waves were not considerable, and as yet not otherwise accounted for.

When the wind blows so fresh, as that the waves are not sufficiently quick in obeying its impulse, their tops being thinner and lighter are pushed forward, broken, and turned over in a white foam. Common waves lift a vessel without entering it; but these when large sometimes break above and pour over it, doing great damage.

That this effect might in any degree be prevented, or the height and violence of waves in the sea moderated, we had no certain account; Pliny's authority for the practice of seamen in his time being slighted. But discoursing lately on this subject with his excellency count Bentinck, of Holland, his son the honourable captain Bentinck, and the learned professor Allemand (to all whom I showed the experiment of smoothing in a windy day the large piece of water at the head of the Green Park) a letter was mentioned, which had been received by the count from Batavia, relative to the saving of a Dutch ship in a storm by pouring oil into the sea. I much desired to see that letter, and a copy of it was promised me, which I afterward received.

Mr. Tengnagel to Count Bentinck.

BATAVIA, January 5, 1770.

NEAR the islands Paul and Amsterdam, we met with a storm, which had nothing particular in it worthy of being communicated

to you, except that the captain found himself obliged for greater safety in wearing the ship, to pour oil into the sea, to prevent the waves breaking over her, which had an excellent effect, and succeeded in preserving us. As he poured out but a little at a time, the East India Company owes perhaps its ship to only six demi-ames of olive-oil. I was present upon deck when this was done; and I should not have mentioned this circumstance to you, but that we have found people here so prejudiced against the experiment, as to make it necessary for the officers on board and myself to give a certificate of the truth on this head, of which we made no difficulty.

On this occasion, I mentioned to captain Bentinck, a thought which had occurred to me in reading the voyages of our late circumnavigators, particularly where accounts are given of pleasant and fertile islands which they much desired to land upon, when sickness made it more necessary, but could not effect a landing through a violent surf breaking on the shore, which rendered it impracticable. My idea was, that possibly by sailing to and fro at some distance from such lee-shore, continually pouring oil into the sea, the waves might be so much depressed, and lessened before they reached the shore, as to abate the height and violence of the surf, and permit a landing; which, in such circumstances, was a point of sufficient importance to justify the expense of the oil that might be requisite for the purpose. That gentleman, who is ever ready to promote what may be of public utility, though his own ingenious inventions have not always met with the countenance they merited, was so obliging as to invite me to Portsmouth, where an opportunity would probably offer, in the course of a few days, of making the experiment on some of the shores about Spithead, in which he kindly proposed to accompany me, and to give assistance with such boats as might be necessary. Accordingly, about the middle of October last, I went with some friends to Portsmouth; and a day of wind happening, which made a lee-shore between Hasler-hospital and the point near Jillkecker, we went from the Centaur with the long-boat and barge towards that shore. Our disposition was this: the long-boat was anchored about a quarter of a mile from the shore; part of the company were landed behind the point (a place more sheltered from the sea) who came round and placed themselves opposite to the long boat, where they might observe the surf, and note if any change occurred in it upon using the oil. Another party, in the barge, plied to windward of the long boat, as far from her as she was from the shore, making trips of about half a mile each, pouring oil continually out of a large stone bottle, through a hole in the cork, somewhat bigger than a goose-quill. The experiment had not, in the main point, the success we wished, for no material difference was observed in the height or force of the surf upon the shore; but those who were in the long-boat could observe a tract of smooth water, the whole of the distance in which the barge poured the oil, and gradually spreading in breadth towards the long-boat. I call it smoothed, not that it was laid level; but because, though the swell continued, its surface was not roughened by the wrinkles, or smaller waves, before-mentioned; and none or very few white caps (or waves whose tops turn over in foam) appeared in that whole space, though to windward and leeward of it there were plenty; and a wherry, that came round the point under sail, in her way to Portsmouth, seemed to turn into that tract of choice, and to use from end to end, as a piece of turnpike-road.

It may be of use to relate the circumstances of an experiment that does not succeed, since they may give hints of amendment in future trials: it is therefore I have been thus particular. I shall only add what I apprehend may have been the reason of our disappointment.

I conceive, that the operation of oil on water is, first, to prevent the raising of new waves by the wind; and, secondly, to prevent its pushing those before raised with such force, and consequently their continuance of the same repeated height, as they would have done, if their surface were not oiled. But oil will not prevent waves being raised by another power, by a stone, for instance, falling into a still pool; for they then rise by the mechanical impulse of the stone, which the greasiness on the surrounding water cannot lessen or prevent, as it can prevent the winds catching the surface and raising it into waves. Now waves once raised, whether by the wind or any other power, have the same mechanical operation, by which they continue to rise and fall, as a *pendulum* will continue to swing, a long time after the force ceases to act by which the motion was first produced: that motion will, however, cease in time; but time is necessary. Therefore, though oil spread on an agitated sea may weaken the push of the wind on those waves whose surfaces are covered by it, and so, by receiving fresh impulse, they may gradually subside; yet a considerable time, or a distance through which they will take time to move, may be necessary to make the effect sensible on any shore in a diminution of the surf: for we know, that when wind ceases suddenly, the waves it has raised do not as suddenly subside, but settle gradually, and are not quite down till after the wind has ceased. So though we should, by oiling them, take off the effect of wind on waves already raised, it is not to be expected that those waves should be

instantly levelled. The motion they have received, will for some time continue; and if the shore is not far distant, they arrive there so soon, that their effect upon it will not be visibly diminished. Possibly, therefore, if we had begun our operations at a greater distance, the effect might have been more sensible. And perhaps we did not pour oil in sufficient quantity. Future experiments may determine this.

I was, however, greatly obliged to captain Bentinck, for the cheerful and ready aids he gave me: and I ought not to omit mentioning Mr. Banks, Dr. Solander, general Carnac, and Dr. Blagden, who all assisted at the experiment, during that blustering unpleasant day, with a patience and activity that could only be inspired by a zeal for the improvement of knowledge, such especially as might possibly be of use to men in situations of distress.

I would wish you to communicate this to your ingenious friend, Mr. Farish, with my respects; and believe me to be, with sincere esteem, B. FRANKLIN.

To Peter Collinson, London.

Electrical Kite.

PHILADELPHIA, Oct. 16, 1752.

As frequent mention is made in public papers from Europe of the success of the Philadelphia experiment for drawing the electric fire from clouds by means of pointed rods of iron erected on high buildings, &c. it may be agreeable to the curious to be informed that the same experiment has succeeded in Philadelphia, though made in a different and more easy manner, which is as follows:

Make a small cross of two light strips of cedar, the arms so long as to reach to the four corners of a large thin silk handkerchief when extended; tie the corners of the handkerchief to the extremities of the cross, so you have the body of a kite; which being properly accommodated with a tail, loop, and string, will rise in the air, like those made of paper; but this being of silk is fitter to bear the wet and wind of a thunder gust without tearing. To the top of the upright stick of the cross is to be fixed a very sharp pointed wire, rising a foot or more above the wood. To the end of the twine, next the hand, is to be tied a silk ribbon, and where the silk and twine join, a key may be fastened. This kite is to be raised when a thunder-gust appears to be coming on, and the person who holds the string must stand within a door or window, or under some cover, so that the silk ribbon may not be wet; and care must be taken that the twine does not touch the frame of the door or window. As soon as any of the thunder clouds come over the kite, the pointed wire will draw the electric fire from them, and the kite, with all the twine, will be electrified, and the loose filaments of the twine will stand out every way, and be attracted by an approaching finger. And when the rain has wetted the kite and twine, so that it can conduct the electric fire freely, you will find it stream out plentifully from the key on the approach of your knuckle. At this key the phial may be charged; and from electric fire thus obtained, spirits may be kindled, and all the other electric experiments be performed, which are usually done by the help of a rubbed glass globe or tube, and thereby the sameness of the electric matter with that of lightning completely demonstrated. B. FRANKLIN.

To the same.

Hypothesis, of the Sea being the grand source of Lightning, retracted. Positive, and sometimes negative, Electricity of the Clouds discovered.—New Experiments and Conjectures in support of this Discovery.—Observations recommended for ascertaining the Direction of the electric Fluid.—Size of Rods for Conductors to Buildings.—Appearance of a Thunder-cloud described.

PHILADELPHIA, September, 1753.

In my former paper on this subject, written first in 1747, enlarged and sent to England in 1749, I considered the sea as the grand source of lightning, imagining its luminous appearance to be owing to electric fire produced by friction between the particles of water and those of salt. Living far from the sea, I had then no opportunity of making experiments on the sea water, and so embraced this opinion too hastily.

For in 1750, and 1751, being occasionally on the sea-coast, I found by experiments, that sea-water in a bottle, though at first it would by agitation appear luminous, yet in a few hours it lost that virtue: *hence and from this*, that I could not by agitating a solution of sea-salt in water produce any light, I first began to doubt of my former hypothesis, and to suspect that the luminous appearance in sea-water must be owing to some other principles.

I then considered whether it were not possible, that the particles of air, being electrics *per se*, might, in hard gales of wind, by their friction against trees, hills, buildings, &c. as so many minute electric globes, rubbing against non-electric cushions, draw the electric fire from the earth, and that the rising vapours might receive the fire from the air, and by such means the clouds become electrified.

If this were so, I imagined that by forcing a constant violent stream of air against my prime conductor, by bellows, I should electrify it *negatively*; the rubbing particles of air, drawing from it part of its natural quantity of the electric fluid. I accordingly made the experiment, but it did not succeed.

In September 1752, I erected an iron rod to draw the lightning down into my house, in order to make some experiments on it, with two bells to give notice when the rod should be electrified; a contrivance obvious to every electrician.

I found the bells rang sometimes when there was no lightning or thunder, but only a dark cloud over the rod; that sometimes after a flash of lightning they would suddenly stop; and at other times, when they had not rang before, they would, after a flash, suddenly begin to ring; that the electricity was sometimes very faint, so that when a small spark was obtained, another could not be got for some time after; at other times the sparks would follow extremely quick, and once I had a continual stream from bell to bell, the size of a crow quill: even during the same gust there were considerable variations.

In the winter following I conceived an experiment, to try whether the clouds were electrified *positively* or *negatively;* but my pointed rod, with its apparatus, becoming out of order, I did not refit it till towards the spring, when I expected the warm weather would bring on more frequent thunder-clouds.

The experiment was this: to take two phials; charge one of them with lightning from the iron rod, and give the other an equal charge by the electric glass globe, through the prime conductor: when charged, to place them on a table within three or four inches of each other, a small cork ball being suspended by a fine silk thread from the ceiling, so as it might play between the wires. If both bottles then were electrified *positively*, the ball being attracted and repelled by one, must be also repelled by the other. If the one *positively*, and the other *negatively;* then the ball would be attracted and repelled alternately by each, and continue to play between them as long as any considerable charge remained.

Being very intent on making this experiment, it was no small mortification to me, that I happened to be abroad during two of the greatest thunder-storms we had early in the spring, and though I had given orders in my family, that if the bells rang when I was from home, they should catch some of the lightning for me in electrical phials, and they did so, yet it was mostly dissipated before my return, and in some of the other gusts, the quantity of lightning I was able to obtain was so small, and the charge so weak, that I could not satisfy myself: yet I sometimes saw what heightened my suspicions, and inflamed my curiosity.

At last, on the 12th of April, 1753, there being a smart gust of some continuance, I charged one phial pretty well with lightning, and the other equally, as near as I could judge, with electricity from my glass globe; and, having placed them properly, I beheld, with great surprise and pleasure, the cork ball play briskly between them; and was convinced that one bottle was electrised *negatively*.

I repeated this experiment several times during the gust, and in eight succeeding gusts, always with the same success; and being of opinion (for reasons I formerly gave in my letter to Mr. Kinnersley, since printed in London) that the glass globe electrises *positively*, I concluded that the clouds are *always* electrised *negatively*, or have always in them less than their natural quantity of the electric fluid.

Yet notwithstanding so many experiments, it seems I concluded too soon; for at last, June the 6th, in a gust which continued from five o'clock, P. M. to seven, I met with one cloud that was electrised positively, though several that passed over my rod before, during the same gust, were in the negative state. This was thus discovered.

I had another concurring experiment, which I often repeated, to prove the negative state of the clouds, viz. while the bells were ringing, I took the phial charged from the glass globe, and applied its wire to the erected rod, considering, that if the clouds were electrised *positively*, the rod which received its electricity from them must be so too; and then the additional *positive* electricity of the phial would make the bells ring faster:—but, if the clouds were in a *negative* state, they must exhaust the electric fluid from my rod, and bring that into the same negative state with themselves, and then the wire of a positively charged phial, supplying the rod with what it wanted (which it was obliged otherwise to draw from the earth by means of the pendulous brass ball playing between the two bells) the ringing would cease till the bottle was discharged.

In this manner I quite discharged into the rod several phials, that were charged from the glass globe, the electric fluid streaming from the wire to the rod, till the wire would receive no spark from the finger; and, during this supply, to the rod from the phial, the bells stopped ringing; but by continuing the application of the phial wire to the rod, I exhausted the natural quantity from the inside surface of the same phials, or, as I call it, charged them *negatively*.

At length, while I was charging a phial by my glass globe, to repeat this experiment, my bells, of themselves, stopped ringing, and after some pause, began to ring again.—But now, when I approached the wire of the charged phial to the rod, instead of the usual stream that I expected from the wire to the rod, there was no spark; not even when I brought the wire and the rod to touch; yet the bells continued ringing vigorously, which proved to me, that the rod was then *positively*

electrified, as well as the wire of the phial, and equally so; and consequently, that the particular cloud then over the rod was in the same positive state. This was near the end of the gust.

But this was a single experiment, which, however, destroys my first too general conclusion, and reduces me to this: *That the clouds of a thunder-gust are most commonly in a negative state of electricity, but sometimes in a positive state.*

The latter I believe is rare; for though I soon after the last experiment set out on a journey to Boston, and was from home most part of the summer, which prevented my making farther trials and observations; yet Mr. Kinnersley returning from the islands just as I left home, pursued the experiments during my absence, and informs me that he always found the clouds in the *negative* state.

So that, for the most part, in thunder-strokes, *it is the earth that strikes into the clouds, and not the clouds that strike into the earth.*

Those who are versed in electric experiments, will easily conceive, that the effects and appearances must be nearly the same in either case; the same explosion, and the same flash between one cloud and another, and between the clouds and mountains, &c. the same rending of trees, walls, &c. which the electric fluid meets with in its passage, and the same fatal shock to animal bodies; and that pointed rods fixed on buildings, or masts of ships, and communicating with the earth or sea, must be of the same service in restoring the equilibrium silently between the earth and clouds, or in conducting a flash or stroke, if one should be, so as to save harmless the house or vessel: for points have equal power to throw off, as to draw on the electric fire, and rods will conduct up as well as down.

But though the light gained from these experiments makes no alteration in the practice, it makes a considerable one in the theory. And now we as much need an hypothesis to explain by what means the clouds become negatively, as before to show how they became positively electrified.

I cannot forbear venturing some few conjectures on this occasion; they are what occur to me at present, and though future discoveries should prove them not wholly right, yet they may in the mean time be of some use, by stirring up the curious to make more experiments, and occasion more exact disquisitions.

I conceive then, that this globe of earth and water, with its plants, animals, and buildings, have diffused throughout their substance, a quantity of the electric fluid, just as much as they can contain, which I call the *natural quantity.*

That this natural quantity is not the same in all kinds of common matter under the same dimensions, nor in the same kind of common matter in all circumstances; but a solid foot, for instance, of one kind of common matter, may contain more of the electric fluid than a solid foot of some other kind of common matter; and a pound weight of the same kind of common matter may, when in a rarer state, contain more of the electric fluid than when in a denser state.

For the electric fluid, being attracted by any portion of common matter, the parts of that fluid, (which have among themselves a mutual repulsion) are brought so near to each other by the attraction of the common matter that absorbs them, as that their repulsion is equal to the condensing power of attraction in common matter; and then such portion of common matter will absorb no more.

Bodies of different kinds having thus attracted and absorbed what I call ther *natural quantity, i. e.* just as much of the electric fluid as is suited to their circumstances of density, rarity, and power of attracting, do not then show any signs of electricity among each other.

And if more electric fluid be added to one of these bodies, it does not enter, but spreads on the surface, forming an atmosphere; and then such body shows signs of electricity.

I have in a former paper compared common matter to a sponge, and the electric fluid to water: I beg leave once more to make use of the same comparison, to illustrate farther my meaning in this particular.

When a sponge is somewhat condensed by being squeezed between the fingers, it will not receive and retain so much water as when in its more loose and open state.

If *more* squeezed and condensed, some of the water will come out of its inner parts, and flow on the surface.

If the pressure of the fingers be entirely removed, the sponge will not only resume what was lately forced out, but attract an additional quantity.

As the sponge in its rarer state will *naturally* attract and absorb *more* water, and in its denser state will *naturally* attract and absorb *less* water; we may call the quantity it attracts and absorbs in either state, its *natural quantity*, the state being considered.

Now what the sponge is to water, the same is water to the electric fluid.

When a portion of water is in its common dense state, it can hold no more electric fluid than it has: if any be added, it spreads on the surface.

When the same portion of water is rarified into vapour, and forms a cloud, it is then capable of receiving and absorbing a much greater quantity; there is room for each particle to have an electric atmosphere.

Thus water, in its rarified state, or in the form of a cloud, will be in a negative state of electricity; it will have less than its *natural quantity*; that is, less than it is naturally capable of attracting and absorbing in that state.

Such a cloud then, coming so near the earth as to be within the striking distance, will receive from the earth a flash of the electric fluid; which flash, to supply a great extent of cloud, must sometimes contain a very great quantity of that fluid.

Or such a cloud, passing over woods of tall trees, may from the points and sharp edges of their moist top leaves, receive silently some supply.

A cloud being by any means supplied from the earth, may strike into other clouds that have not been supplied, or not so much supplied; and those to others, till an equilibrium is produced among all the clouds that are within striking distance of each other.

The cloud thus supplied having parted with much of what it first received, may require and receive a fresh supply from the earth, or from some other cloud, which by the wind is brought into such a situation as to receive it more readily from the earth.

Hence repeated and continual strokes and flashes till the clouds have all got nearly their natural quantity as clouds, or till they have descended in showers, and are united again with this terraqueous globe, their original.

Thus, thunder-clouds are generally in a negative state of electricity compared with the earth, agreeable to most of our experiments; yet as by one experiment we found a cloud electrised positively, I conjecture that, in that case, such cloud, after having received what was, in its rare state, only its *natural quantity*, became compressed by the driving winds, or some other means, so that part of what it had absorbed was forced out, and formed an electric atmosphere around it in its denser state. Hence it was capable of communicating positive electricity to my rod.

To show that a body in different circumstances of dilatation and contraction is capable of receiving and retaining more or less of the electric fluid on its surface, I would relate the following experiment: I placed a clean wine glass on the floor, and on it a small silver can. In the can I put about three yards of brass chain; to one end of which I fastened a silk thread, which went right up to the ceiling, where it passed over a pulley, and came down again to my hand, that I might at pleasure draw the chain up out of the can, extending it till within a foot of the ceiling, and let it gradually sink into the can again.—From the ceiling, by another thread of fine raw silk, I suspended a small light lock of cotton, so as that when it hung perpendicularly, it came in contact with the side of the can. Then approaching the wire of a charged phial to the can, I gave it a spark, which flowed round in an electric atmosphere; and the lock of cotton was repelled from the side of the can to the distance of about nine or ten inches. The can would not then receive another spark from the wire of the phial: but as I gradually drew up the chain, the atmosphere of the can diminished by flowing over the rising chain, and the lock of cotton accordingly drew nearer and nearer to the can; and then, if I again brought the phial wire near the can, it would receive another spark, and the cotton fly off again to its first distance; and thus, as the chain was drawn higher, the can would receive more sparks; because the can and extended chain were capable of supporting a greater atmosphere than the can with the chain gathered up into its belly.—And that the atmosphere round the can was diminished by raising the chain, and increased again by lowering it, is not only agreeable to reason, since the atmosphere of the chain must be drawn from that of the can, when it rose, and returned to it again when it fell; but was also evident to the eye, the lock of cotton always approaching the can when the chain was drawn up, and receding when it was let down again.

Thus we see that increase of surface makes a body capable of receiving a greater electric atmosphere: but this experiment does not, I own, fully demonstrate my new hypothesis; for the brass and silver still continue in their solid state, and are not rarified into vapour, as the water is in clouds. Perhaps some future experiments on vapourised water may set this matter in a clearer light.

One seemingly material objection arises to the new hypothesis, and it is this: if water, in its rarified state, as a cloud, requires, and will absorb more of the electric fluid than when in its dense state as water, why does it not acquire from the earth all it wants at the instant of its leaving the surface, while it is yet near, and but just rising in vapour? To this difficulty I own I cannot at present give a solution satisfactory to myself: I thought, however, that I ought to state it in its full force, as I have done, and submit the whole to examination.

And I would beg leave to recommend it to the curious in this branch of natural philosophy, to repeat with care and accurate observation the experiments I have reported in this and former papers relating to *positive* and *negative* electricity, with such other relative ones as shall occur to them, that it may be certainly known whether the electricity communicated by a glass globe, be *really positive*. And also I would request all who may have an opportunity of observing the recent effects of lightning on buildings, trees, &c. that they would consider them particularly with a view to discover the direction. But in these ex-

aminations, this one thing is always to be understood, viz. that a stream of the electric fluid passing through wood, brick, metal, &c. while such fluid passes in *small quantity*, the mutually repulsive power of its parts is confined and overcome by the cohesion of the parts of the body it passes through, so as to prevent an explosion; but when the fluid comes in a quantity too great to be confined by such cohesion, it explodes, and rends or fuses the body that endeavoured to confine it. If it be wood, brick, stone, or the like, the splinters will fly off on that side where there is least resistance. And thus, when a hole is struck through pasteboard by the electrified jar, if the surfaces of the pasteboard are not confined or compressed, there will be a bur raised all round the hole on both sides the pasteboard; but if one side be confined, so that the bur cannot be raised on that side, it will be all raised on the other, which way soever the fluid was directed. For the bur round the outside of the hole, is the effect of the explosion every way from the centre of the stream, and not an effect of the direction.

In every stroke of lightning, I am of opinion that the stream of the electric fluid, moving to restore the equilibrium between the cloud and the earth, does always previously find its passage, and mark out, as I may say, its own course, taking in its way all the conductors it can find, such as metals, damp walls, moist wood, &c. and will go considerably out of a direct course, for the sake of the assistance of good conductors; and that, in this course, it is actually moving, though silently and imperceptibly, before the explosion, in and among the conductors: which explosion happens only when the conductors cannot discharge it as fast as they receive it, by reason of their being incomplete, disunited, too small, or not of the best materials for conducting. Metalline rods, therefore, of sufficient thickness, and extending from the highest part of an edifice to the ground, being of the best materials and complete conductors, will, I think, secure the building from damage, either by restoring the equilibrium so fast as to prevent a stroke, or by conducting it in the substance of the rod as far as the rod goes, so that there shall be no explosion but what is above its point, between that and the clouds.

If it be asked, what thickness of a metalline rod may be supposed sufficient? In answer, I would remark, that five large glass jars, such as I have described in my former papers, discharge a very great quantity of electricity, which nevertheless will be all conducted round the corner of a book, by the fine filleting of gold on the cover, it following the gold the farthest way about, rather than take the shorter course through the cover, that not being so good a conductor. Now in this line of gold, the metal is so extremely thin as to be little more than the colour of gold, and on an octavo book is not in the whole an inch square, and therefore not the thirty-sixth part of a grain, according to M. Reaumur; yet it is sufficient to conduct the charge of five large jars, and how many more I know not. Now, I suppose a wire of a quarter of an inch diameter to contain about five thousand times as much metal as there is in that gold line, and if so, it will conduct the charge of twenty-five thousand such glass jars, which is a quantity, I imagine, far beyond what was ever contained in any one stroke of natural lightning. But a rod of half an inch diameter would conduct four times as much as one of a quarter.

And with regard to conducting, though a certain thickness of metal be required to conduct a great quantity of electricity, and, at the same time, keep its own substance firm and unseparated; and a less quantity, as a very small wire for instance, will be destroyed by the explosion; yet such small wire will have answered the end of conducting that stroke, though it becomes incapable of conducting another. And considering the extreme rapidity with which the electric fluid moves without exploding, when it has a free passage, or complete metal communication, I should think a vast quantity would be conducted in a short time, either to or from a cloud, to restore its equilibrium with the earth, by means of a very small wire: and therefore thick rods should seem not so necessary.—However, as the quantity of lightning discharged in one stroke, cannot well be measured, and, in different strokes, is certainly very various, in some much greater than others; and as iron (the best metal for the purpose, being least apt to fuse) is cheap, it may be well enough to provide a larger canal to guide that impetuous blast than we may imagine necessary: for, though one middling wire may be sufficient, two or three can do no harm. And time, with careful observations well compared, will at length point out the proper size to greater certainty.

Pointed rods erected on edifices may likewise often prevent a stroke, in the following manner: an eye so situated as to view horizontally the under side of a thunder-cloud, will see it very ragged, with a number of separate fragments, or petty clouds, one under another, the lowest sometimes not far from the earth. These, as so many stepping stones, assist in conducting a stroke between the cloud and a building. To represent these by an experiment, take two or three locks of fine loose cotton, connect one of them with the prime conductor by a fine thread of two inches (which may be spun out of the same lock by the fingers) another to that, and the third to the second, by like threads.—Turn the globe and you will see these locks extend themselves towards the table (as the lower small clouds

do towards the earth) being attracted by it: but on presenting a sharp point erect under the lowest, it will shrink up to the second, the second to the first, and all together to the prime conductor, where they will continue as long as the point continues under them. May not, in like manner, the small electrised clouds, whose equilibrium with the earth is soon restored by the point, rise up to the main body, and by that means occasion so large a vacancy, as that the grand cloud cannot strike in that place?

These thoughts, my dear friend, are many of them crude and hasty; and if I were merely ambitious of acquiring some reputation in philosophy, I ought to keep them by me, till corrected and improved by time, and farther experience. But since even short hints and imperfect experiments in any new branch of science, being communicated, have oftentimes a good effect in exciting the attention of the ingenious to the subject, and so become the occasion of more exact disquisition, and more complete discoveries, you are at liberty to communicate this paper to whom you please; it being of more importance that knowledge should increase, than that your friend should be thought an accurate philosopher.

B. FRANKLIN.

To Peter Collinson.

Additional proofs of the positive and negative state of Electricity in the Clouds.—New method of ascertaining it.

PHILADELPHIA, April 18, 1754.

SINCE September last, having been abroad on two long journies, and otherwise much engaged, I have made but few observations on the *positive* and *negative* state of electricity in the clouds. But Mr. Kinnersley kept his rod and bells in good order, and has made many.

Once this winter the bells rang a long time during a fall of snow, though no thunder was heard, nor lightning seen. Sometimes the flashes and cracks of the electric matter between bell and bell were so large and loud as to be heard all over the house: but by all his observations, the clouds were constantly in a negative state, till about six weeks ago, when he found them once to change in a few minutes from the negative to the positive. About a fortnight after that, he made another observation of the same kind; and last Monday afternoon, the wind blowing hard at S. E. and veering round to N. E. with many thick driving clouds, there were five or six successive changes from negative to positive, and from positive to negative, the bells stopping a minute or two between every change. Besides the methods mentioned in my paper of September last, of discovering the electrical state of the clouds, the following may be used. When your bells are ringing, pass a rubbed tube by the edge of the bell, connected with your pointed rod: if the cloud is then in a negative state, the ringing will stop; if in a positive state, it will continue, and perhaps be quicker. Or, suspend a very small cork-ball by a fine silk thread, so that it may hang close to the edge of the rod-bell: then whenever the bell is electrified, whether positively or negatively, the little ball will be repelled, and continue at some distance from the bell. Have ready a round-headed glass stopper of a decanter, rub it on your side till it is electrified, then present it to the cork-ball. If the electricity in the ball is positive, it will be repelled from the glass stopper as well as from the bell. If negative it will fly to the stopper.

B. FRANKLIN.

Electrical Experiments.

With an attempt to account for their several phenomena. Together with some observations on thunder-clouds, in further confirmation of Dr. Franklin's observations on the positive and negative electrical state of the clouds, by John Canton, M. A. and F. R. S.

Dec. 6, 1753.

EXPERIMENT I.

FROM the ceiling, or any convenient part of a room, let two cork-balls, each about the bigness of a small pea, be suspended by linen threads of eight or nine inches in length, so as to be in contact with each other. Bring the excited glass tube under the balls, and they will be separated by it, when held at the distance of three or four feet; let it be brought nearer, and they will stand farther apart; entirely withdraw it, and they will immediately come together. This experiment may be made with very small brass balls hung by silver wire; and will succeed as well with sealing wax made electrical, as with glass.

EXPERIMENT II.

If two cork-balls be suspended by dry silk threads, the excited tube must be brought within eighteen inches before they will repel each other; which they will continue to do, for some time, after the tube is taken away.

As the balls in the first experiment are not insulated, they cannot properly be said to be electrified: but when they hang within the atmosphere of the excited tube, they may attract and condense the electrical fluid round about them, and be separated by the repulsion of its particles. It is conjectured also, that the balls at this time contain less than their common share of the electrical fluid, on account of the repelling power of that which surrounds them; though some, perhaps, is continually entering and passing through the threads. And if that be the case, the reason is plain why the balls hung by silk, in the

second experiment, must be in a much more dense part of the atmosphere of the tube, before they will repel each other. At the approach of an excited stick of wax to the balls, in the first experiment, the electrical fire is supposed to come through the threads into the balls, and be condensed there, in its passage towards the wax; for, according to Mr. Franklin, excited glass *emits* the electrical fluid, but excited wax *receives* it.

EXPERIMENT III.

Let a tin tube, of four or five feet in length, and about two inches in diameter, be insulated by silk; and from one end of it let the cork-balls be suspended by linen threads. Electrify it, by bringing the excited glass tube near the other end, so as that the balls may stand an inch and a half, or two inches apart: then, at the approach of the excited tube, they will by degrees, lose their repelling power, and come into contact; and as the tube is brought still nearer, they will separate again to as great a distance as before: in the return of the tube they will approach each other till they touch, and then repel as at first. If the tin tube be electrified by wax, or the wire of a charged phial, the balls will be affected in the same manner at the approach of excited wax, or the wire of the phial.

EXPERIMENT IV.

Electrify the cork-balls as in the last experiment by glass, and at the approach of an excited stick of wax their repulsion will be increased. The effect will be the same, if the excited glass be brought towards them, when they have been electrified by wax.

The bringing the excited glass to the end, or edge of the tin tube, in the third experiment, is supposed to electrify it positively, or to add to the electrical fire it before contained; and therefore some will be running off through the balls, and they will repel each other. But at the approach of excited glass, which likewise *emits* the electrical fluid, the discharge of it from the balls will be diminished; or part will be driven back, by a force acting in a contrary direction: and they will come nearer together. If the tube be held at such a distance from the balls, that the excess of the density of the fluid round about them, above the common quantity in air, be equal to the excess of the density of that within them, above the common quantity contained in cork; their repulsion will be quite destroyed. But if the tube be brought nearer; the fluid without being more dense than within the balls, it will be attracted by them, and they will recede from each other again.

When the apparatus has lost part of its natural share of this fluid, by the approach of excited wax to one end of it, or is electrified negatively; the electrical fire is attracted and imbibed by the balls to supply the deficiency; and that more plentifully at the approach of excited glass; or a body positively electrified, than before; whence the distance between the balls will be increased, as the fluid surrounding them is augmented. And in general, whether by the approach or recess of any body; if the difference between the density of the internal and external fluid be increased or diminished; the repulsion of the balls will be increased or diminished accordingly.

EXPERIMENT V.

When the insulated tin tube is not electrified, bring the excited glass tube towards the middle of it, so as to be nearly at right angles with it, and the balls at the end will repel each other; and the more so, as the excited tube is brought nearer. When it has been held a few seconds, at the distance of about six inches, withdraw it, and the balls will approach each other till they touch; and then separating again, as the tube is moved farther off, will continue to repel when it is taken quite away. And this repulsion between the balls will be increased by the approach of excited glass, but diminished by excited wax; just as if the apparatus had been electrified by wax, after the manner described in the third experiment.

EXPERIMENT VI.

Insulate two tin tubes, distinguished by A and B, so as to be in a line with each other, and about half an inch apart; and at the remote end of each, let a pair of cork balls be suspended. Towards the middle of A, bring the excited glass tube, and holding it a short time, at the distance of a few inches, each pair of balls will be observed to separate: withdraw the tube, and the balls of A will come together, and then repel each other again; but those of B will hardly be affected. By the approach of the excited glass tube, held under the balls of A, their repulsion will be increased: but if the tube be brought, in the same manner, towards the balls of B, their repulsion will be diminished.

In the fifth experiment, the common stock of electrical matter in the tin tube is supposed to be attenuated about the middle, and to be condensed at the ends, by the repelling power of the atmosphere of the excited glass tube, when held near it. And perhaps the tin tube may lose some of its natural quantity of the electrical fluid, before it receives any from the glass; as that fluid will more readily run off from the ends and edges of it, than enter at the middle: and accordingly, when the glass tube is withdrawn, and the fluid is again equally diffused through the apparatus, it is found to be electrified negatively: for excited glass brought under the balls will increase their repulsion.

In the sixth experiment, part of the fluid driven out of one tin tube enters the other; which is found to be electrified positively, by the decreasing of the repulsion of its balls, at the approach of excited glass.

EXPERIMENT VII.

Let the tin tube, with a pair of balls at one end, be placed three feet at least from any part of the room, and the air rendered very dry by means of a fire: electrify the apparatus to a considerable degree; then touch the tin tube with a finger, or any other conductor, and the balls will, notwithstanding, continue to repel each other; though not at so great a distance as before.

The air surrounding the apparatus to the distance of two or three feet, is supposed to contain more or less of the electrical fire, than its common share, as the tin tube is electrified positively, or negatively: and when very dry, may not part with its overplus, or have its deficiency supplied so suddenly, as the tin; but may continue to be electrified, after that has been touched for a considerable time.

EXPERIMENT VIII.

Having made the Torricellian vacuum about five feet long, after the manner described in the *Philosophical Transactions*, vol. xlvii. p. 370, if the excited tube be brought within a small distance of it, a light will be seen through more than half its length; which soon vanishes, if the tube be not brought nearer; but will appear again, as that is moved farther off.—This may be repeated several times, without exciting the tube afresh.

This experiment may be considered as a kind of ocular demonstration of the truth of Mr. Franklin's hypothesis; that when the electrical fluid is condensed on one side of thin glass, it will be repelled from the other, if it meets with no resistance. According to which, at the approach of the excited tube, the fire is supposed to be repelled from the inside of the glass surrounding the vacuum, and to be carried through the columns of mercury; but as the tube is withdrawn, the fire is supposed to return.

EXPERIMENT IX.

Let an excited stick of wax, of two feet and a half in length, and about an inch in diameter, be held near its middle. Excite the glass tube, and draw it over one half of it; then, turning a little about its axis, let the tube be excited again, and drawn over the same half; and let this operation be repeated several times; then will that half destroy the repelling power of balls electrified by glass, and the other half will increase it.

By this experiment it appears, that wax also may be electrified positively and negatively. And it is probable, that all bodies whatsoever may have the quantity they contain of the electrical fluid increased or diminished. The clouds, I have observed, by a great number of experiments, to be some in a positive, and others in a negative state of electricity. For the cork balls, electrified by them, will sometimes close at the approach of excited glass; and at other times be separated to a greater distance. And this change I have known to happen five or six times in less than half an hour; the balls coming together each time, and remaining in contact a few seconds, before they repel each other again. It may likewise easily be discovered, by a charged phial, whether the electrical fire be drawn out of the apparatus by the negative cloud, or forced into it by a positive one: and by which soever it be electrified, should that cloud either part with its overplus, or have its deficiency supplied suddenly, the apparatus will lose its electricity: which is frequently observed to be the case, immediately after a flash of lightning. Yet when the air is very dry, the apparatus will continue to be electrified for ten minutes, or a quarter of an hour, after the clouds have passed the zenith; and sometimes till they appear more than half-way towards the horizon. Rain, especially when the drops are large, generally brings down the electrical fire; and hail, in summer, I believe never fails. When the apparatus was last electrified, it was by the fall of thawing snow, which happened so lately, as on the 12th of November; that being the twenty-sixth day, and sixty-first time it has been electrified, since it was first set up; which was about the middle of May. And as Fahrenheit's thermometer was but seven degrees above freezing, it is supposed the winter will not entirely put a stop to observations of this sort. At London no more than two thunder storms have happened during the whole summer; and the apparatus was sometimes so strongly electrified in one of them, that the bells, which have been frequently rung by the clouds, so loud as to be heard in every room of the house (the doors being open) were silenced by the almost constant stream of dense electrical fire, between each bell and the brass ball, which would not suffer it to strike.

I shall conclude this paper, already too long, with the following queries:

1. May not air, suddenly rarified, give electrical fire to, and air suddenly condensed, receive electrical fire from, clouds and vapours passing through it?

2. Is not the *aurora borealis*, the flashing of electrical fire from positive, towards negative clouds at a great distance, through the upper part of the atmosphere, where the resistance is least?

Experiments made in pursuance of those made by Mr. Canton, dated December 6, 1753; with explanations, by Benjamin Franklin.—Read at the Royal Society, Dec 18, 1755.

PHILADELPHIA, March 14, 1755.

PRINCIPLES.

I. ELECTRIC atmospheres, that flow round non-electric bodies, being brought near each other, do not readily mix and unite into one atmosphere, but remain separate, and repel each other.

This is plainly seen in suspended cork-balls, and other bodies electrified.

II. An electric atmosphere not only repels another electric atmosphere, but will also repel the electric matter contained in the substance of a body approaching it; and without joining or mixing with it, force it to other parts of the body that contained it.

This is shown by some of the following experiments.

III. Bodies electrified negatively, or deprived of their natural quantity of electricity, repel each other, (or at least appear to do so, by a mutual receding) as well as those electrified positively, or which have electric atmospheres.

This is shown by applying the negatively charged wire of a phial to two cork-balls, suspended by silk threads, and many other experiments.

PREPARATION.

Fix a tassel of fifteen or twenty threads, three inches long, at one end of a tin prime conductor (mine is about five feet long, and four inches diameter) supported by silk lines.

Let the threads be a little damp, but not wet.

EXPERIMENT I.

Pass an excited glass tube near the other end of the prime conductor, so as to give it some sparks, and the threads will diverge.

Because each thread, as well as the prime conductor, has acquired an electric atmosphere, which repels and is repelled by the atmospheres of the other threads: if those several atmospheres would readily mix, the threads might unite and hang in the middle of one atmosphere, common to them all.

Rub the tube afresh, and approach the prime conductor therewith, crossways, near that end, but not nigh enough to give sparks; and the threads will diverge a little more.

Because the atmosphere of the prime conductor is pressed by the atmosphere of the excited tube, and driven towards the end where the threads are, by which each thread acquires more atmosphere.

Withdraw the tube, and they will close as much.

They close as much, and no more; because the atmosphere of the glass tube not having mixed with the atmosphere of the prime conductor, is withdrawn entire, having made no addition to, or diminution from it.

Bring the excited tube under the tuft of threads, and they will close a little.

They close, because the atmosphere of the glass tube repels their atmosphere, and drives part of them back on the prime conductor.

Withdraw it, and they will diverge as much.

For the portion of atmosphere which they had lost returns to them again.

EXPERIMENT II.

Excite the glass tube, and approach the prime conductor with it, holding it across, near the end opposite to that on which the threads hang, at the distance of five or six inches. Keep it there a few seconds, and the threads of the tassels will diverge. Withdraw it, and they will close.

They diverge, because they have received electric atmospheres from the electric matter before contained in the substance of the prime conductor; but which is now repelled and driven away, by the atmosphere of the glass tube, from the parts of the prime conductor opposite and nearest to that atmosphere, and forced out upon the surface of the prime conductor at its other end, and upon the threads hanging thereto. Were it any part of the atmosphere of the glass tube that flowed over and along the prime conductor to the threads, and gave them atmospheres (as is the case when a spark is given to the prime conductor from the glass tube) such part of the tube's atmosphere would have remained, and the threads continue to diverge; but they close on withdrawing the tube, because the tube takes with it *all its own atmosphere*, and the electric matter, which had been driven out of the substance of the prime conductor, and formed atmospheres round the threads, is thereby permitted to return to its place.

Take a spark from the prime conductor near the threads when they are diverged as before, and they will close.

For by so doing you take away their atmospheres, composed of the electric matter driven out of the substance of the prime conductor, as aforesaid, by the repellency of the atmosphere of the glass tube. By taking this spark you rob the prime conductor of part of its natural quantity of the electric matter, which part so taken is not supplied by the glass tube, for when that is afterwards withdrawn, it takes with it its whole atmosphere, and leaves the prime conductor electrised negatively, as appears by the next operation.

Then withdraw the tube, and they will open again.

For now the electric matter in the prime conductor, returning to its equilibrium, or equal diffusion, in all parts of its substance, and the prime conductor having lost some of its natural quantity, the threads connected with it lose part of theirs, and so are electrised negatively, and therefore repel each other, by *Pr.* III.

Approach the prime conductor with the tube near the same place as at first, and they will close again.

Because the part of their natural quantity of electric fluid, which they had lost, is now restored to them again, by the repulsion of the glass tube forcing that fluid to them from other parts of the prime conductor; so they are now again in their natural state.

Withdraw it, and they will open again.

For what had been restored to them, is now taken from them again, flowing back into the prime conductor and leaving them once more electrised negatively.

Bring the excited tube under the threads, and they will diverge more.

Because more of their natural quantity is driven from them into the prime conductor, and thereby their negative electricity increased.

EXPERIMENT III.

The prime conductor not being electrified, bring the excited tube under the tassel, and the threads will diverge.

Part of their natural quantity is thereby driven out of them into the prime conductor, and they become negatively electrised, and therefore repel each other.

Keeping the tube in the same place with one hand, attempt to touch the threads with the finger of the other hand, and they will recede from the finger.

Because the finger being plunged into the atmosphere of the glass tube, as well as the threads, part of its natural quantity is driven back through the hand and body, by that atmosphere, and the finger becomes, as well as the threads, negatively electrised, and so repels, and is repelled by them. To confirm this, hold a slender light lock of cotton, two or three inches long, near a prime conductor, that is electrified by a glass globe, or tube. You will see the cotton stretch itself out towards the prime conductor. Attempt to touch it with the finger of the other hand, and it will be repelled by the finger. Approach it with a positively charged wire of a bottle, and it will fly to the wire. Bring it near a negatively charged wire of a bottle, it will recede from that wire in the same manner that it did from the finger; which demonstrates the finger to be negatively electrised, as well as the lock of cotton so situated.

Turkey killed by Electricity.—Effect of a shock on the Operator in making the Experiment.

As Mr. Franklin, in a former letter to Mr. Collinson, mentioned his intending to try the power of a very strong electrical shock upon a turkey, that gentleman accordingly has been so very obliging as to send an account of it, which is to the following purpose.

He made first several experiments on fowls, and found, that two large thin glass jars gilt, holding each about six gallons, were sufficient, when fully charged, to kill common hens outright; but the turkeys, though thrown into violent convulsions, and then lying as dead for some minutes, would recover in less than a quarter of an hour. However, having added three other such to the former two, though not fully charged, he killed a turkey of about ten pounds weight, and believes that they would have killed a much larger. He conceited, as himself says, that the birds killed in this manner eat uncommonly tender.

In making these experiments, he found, that a man could, without great detriment, bear a much greater shock than he had imagined: for he inadvertently received the stroke of two of these jars through his arms and body, when they were very near fully charged. It seemed to him an universal blow throughout the body, from head to foot, and was followed by a violent quick trembling in the trunk, which went off gradually, in a few seconds. It was some minutes before he could recollect his thoughts, so as to know what was the matter; for he did not see the flash, though his eye was on the spot of the prime conductor, from whence it struck the back of his hand; nor did he hear the crack, though the bystanders said it was a loud one; nor did he particularly feel the stroke on his hand, though he afterwards found it had raised a swelling there. of the bigness of half a pistol-bullet. His arms and the back of the neck felt somewhat numbed the remainder of the evening, and his breast was sore for a week after, as if it had been bruised. From this experiment may be seen the danger, even under the greatest caution, to the operator, when making these experiments with large jars; for it is not to be doubted, but several of these fully charged would as certainly, by increasing them, in proportion to the size, kill a man, as they before did a turkey.

N. B. The original of this letter, which was read at the Royal Society, has been mislaid.

Dr. Lining at Charleston.

Differences in the Qualities of the Glass.—Account of Domien, an Electrician and Traveller.—Conjectures respecting the pores of Glass.—Origin of the author's idea of drawing down Lightning.—No satisfactory Hypothesis respecting the manner in which Clouds become electrified.—Six men knocked down at once by an electrical shock.—Reflections on the spirit of invention.

PHILADELPHIA, March 18, 1755.

I SEND you enclosed a paper containing some new experiments I have made, in pursuance of those by Mr. Canton that are printed with my last letters. I hope these, with my explanation of them, will afford you some entertainment.*

In answer to your several inquiries. The tubes and globes we use here, are chiefly made here. The glass has a greenish cast, but is clear and hard, and, I think, better for electrical experiments than the white glass of London, which is not so hard. There are certainly great differences in glass. A white globe I had made here some years since, would never, by any means, be excited. Two of my friends tried it, as well as myself, without success. At length, putting it on an electric stand, a chain from the prime conductor being in contact with it, I found it had the properties of a non-electric; for I could draw sparks from any part of it, though it was very clean and dry.

All I know of Domien, is, that by his own account he was a native of Transylvania, of Tartar descent, but a priest of the Greek church: he spoke and wrote Latin very readily and correctly. He set out from his own country with an intention of going round the world, as much as possible by land. He travelled through Germany, France, and Holland, to England. Resided some time at Oxford. From England he came to Maryland; thence went to New England; returned by land to Philadelphia; and from hence travelled through Maryland, Virginia, and North Carolina to you. He thought it might be of service to him in his travels to know something of electricity. I taught him the use of the tube; how to charge the Leyden phial, and some other experiments. He wrote to me from Charleston, that he had lived eight hundred miles upon electricity, it had been meat, drink, and clothing to him. His last letter to me was, I think, from Jamaica, desiring me to send the tubes you mention, to meet him at the Havanna, from whence he expected to get a passage to La Vera Cruz; designed travelling over land through Mexico to Acapulco; thence to get a passage to Manilla, and so through China, India, Persia, and Turkey, home to his own country; proposing to support himself chiefly by electricity. A strange project! But he was, as you observe, a very singular character. I was sorry the tubes did not get to the Havanna in time for him. If they are still in being, please to send for them, and accept of them. What became of him afterwards I have never heard. He promised to write to me as often as he could on his journey, and as soon as he should get home after finishing his tour. It is now seven years since he was here. If he is still in New Spain, as you imagine from that loose report, I suppose it must be that they confine him there, and prevent his writing: but I think it more likely that he may be dead.

The questions you ask about the pores of glass, I cannot answer otherwise, than that I know nothing of their nature; and suppositions, however ingenious, are often mere mistakes. My hypothesis, that they were smaller near the middle of the glass, too small to admit the passage of electricity, which could pass through the surface till it came near the middle, was certainly wrong; for soon after I had written that letter, I did, in order to *confirm* the hypothesis (which indeed I ought to have done before I wrote it) make an experiment. I ground away five sixths of the thickness of the glass, from the side of one of my phials, expecting that the supposed denser part being so removed, the electric fluid might come through the remainder of the glass, which I had imagined more open; but I found myself mistaken. The bottle charged as well after the grinding as before. I am now, as much as ever, at a loss to know how or where the quantity of electric fluid, on the positive side of the glass, is disposed of.

As to the difference of conductors, there is not only this, that some will conduct electricity in small quantities, and yet do not conduct it fast enough to produce the shock; but even among those that will conduct a shock, there are some that do it better than others. Mr. Kinnersley has found, by a very good experiment, that when the charge of a bottle hath an opportunity of passing two ways, *i. e.* straight through a trough of water ten feet long, and six inches square; or round about through twenty feet of wire, it passes through the wire, and not through the water, though that is the shortest course; the wire being the better conductor. When the wire is taken away, it passes through the water, as may be felt by a hand plunged in the water; but it cannot be felt in the water when the wire is used at the same time. Thus, though a small phial containing water will give a smart shock, one containing the same quantity of mercury will give one much stronger, the mercury being the better conductor; while one containing oil only, will scarce give any shock at all.

* See the preceding article, page 292, for the paper here referred to.

Your question, how I came first to think of proposing the experiment of drawing down the lightning, in order to ascertain its sameness with the electric fluid, I cannot answer better than by giving you an extract from the minutes I used to keep of the experiments I made, with memorandums of such as I purposed to make, the reasons for making them, and the observations that arose upon them, from which minutes my letters were afterwards drawn. By this extract you will see that the thought was not so much "an out-of-the-way one," but that it might have occurred to an electrician.

"Nov. 7, 1749. Electrical fluid agrees with lightning in these particulars; 1. Giving light. 2. Colour of the light. 3. Crooked direction. 4. Swift motion. 5. Being conducted by metals. 6. Crack or noise in exploding. 7. Subsisting in water or ice. 8. Rending bodies it passes through. 9. Destroying animals. 10. Melting metals. 11. Firing inflammable substances. 12. Sulphureous smell.—The electric fluid is attracted by points.—We do not know whether this property is in lightning.—But since they agree in all the particulars wherein we can already compare them, is it not probable they agree likewise in this? Let the experiment be made."

I wish I could give you any satisfaction in the article of clouds. I am still at a loss about the manner in which they become charged with electricity; no hypothesis I have yet formed perfectly satisfying me. Some time since, I heated very hot, a brass plate two feet square, and placed it on an electric stand. From the plate a wire extended horizontally four or five feet, and, at the end of it, hung, by linen threads, a pair of cork balls. I then repeatedly sprinkled water over the plate, that it might be raised from it in vapour, hoping that if the vapour either carried off the electricity of the plate, or left behind it that of the water, (one of which I supposed it must do, if, like the clouds, it became electrised itself, either positively or negatively) I should perceive and determine it by the separation of the balls, and by finding whether they were positive or negative; but no alteration was made at all, nor could I perceive that the steam was itself electrised, though I have still some suspicion that the steam was not fully examined, and I think the experiment should be repeated. Whether the first state of electrised clouds is positive or negative, if I could find the cause of that, I should be at no loss about the other, for either is easily deduced from the other, as one state is easily produced by the other. A strongly positive cloud may drive out of a neighbouring cloud much of its natural quantity of the electric fluid, and, passing by it, leave it in a negative state. In the same way, a strongly negative cloud may occasion a neighbouring cloud to draw into itself from others, an additional quantity, and, passing by it, leave it in a positive state. How these effects may be produced, you will easily conceive, on perusing and considering the experiments in the enclosed paper: and from them too it appears probable, that every change from positive to negative, and from negative to positive, that, during a thunder-gust, we see in the cork-balls annexed to the apparatus, is not owing to the presence of clouds in the same state, but often to the absence of positive or negative clouds, that, having just passed, leave the rod in the opposite state.

The knocking down of the six men was performed with two of my large jars not fully charged. I laid one end of my discharging rod upon the head of the first; he laid his hand upon the head of the second; the second his hand on the head of the third, and so to the last, who held, in his hand, the chain that was connected with the outside of the jars. When they were thus placed, I applied the other end of my rod to the prime conductor, and they all dropped together. When they got up, they all declared they had not felt any stroke, and wondered how they came to fall; nor did any of them either hear the crack, or see the light of it. You suppose it a dangerous experiment; but I had once suffered the same myself, receiving, by accident, an equal stroke through my head, that struck me down, without hurting me: and I had seen a young woman who was about to be electrified through the feet (for some indisposition) receive a greater charge through the head, by inadvertently stooping forward to look at the placing of her feet, till her forehead (as she was very tall) came too near my prime conductor: she dropped, but instantly got up again, complaining of nothing. A person so struck, sinks down doubled, or folded together as it were, the joints losing their strength and stiffness at once, so that he drops on the spot where he stood, instantly, and there is no previous staggering, nor does he ever fall lengthwise. Too great a charge might, indeed, kill a man, but I have not yet seen any hurt done by it. It would certainly, as you observe, be the easiest of all deaths.

The experiment you have heard so imperfect an account of, is merely this: I electrified a silver pint can, on an electric stand, and then lowered into it a cork ball, of about an inch diameter, hanging by a silk string, till the cork touched the bottom of the can. The cork was not attracted to the inside of the can as it would have been to the outside, and though it touched the bottom, yet when drawn out, it was not found to be electrified by that touch, as it would have been by touching the outside. The fact is singular. You require the reason; I do not know it. Perhaps you

may discover it, and then you will be so good as to communicate it to me.* I find a frank acknowledgment of one's ignorance is not only the easiest way to get rid of a difficulty, but the likeliest way to obtain information, and therefore I practise it: I think it an honest policy. Those who affect to be thought to know every thing, and so undertake to explain every thing, often remain long ignorant of many things that others could and would instruct them in, if they appeared less conceited.

The treatment your friend has met with is so common, that no man who knows what the world is, and ever has been, should expect to escape it. There are every where a number of people, who being totally destitute of any inventive faculty themselves, do not readily conceive that others may possess it: they think of inventions as of miracles; there might be such formerly, but they are ceased. With these, every one who offers a new invention is deemed a pretender: he had it from some other country, or from some book: a man of *their own acquaintance;* one who has no more sense than themselves, could not possibly, in their opinion, have been the inventor of any thing. They are confirmed too, in these sentiments, by frequent instances of pretensions to invention, which vanity is daily producing. That vanity too, though an incitement to invention, is, at the same time, the pest of inventors. Jealousy and envy deny the merit or the novelty of your invention; but vanity, when the novelty and merit are established, claims it for its own. The smaller your invention is, the more mortification you receive in having the credit of it disputed with you by a rival, whom the jealousy and envy of others are ready to support against you, at least so far as to make the point doubtful. It is not in itself of importance enough for a dispute; no one would think your proofs and reasons worth their attention: and yet, if you do not dispute the point, and demonstrate your right, you not only lose the credit of being in that instance *ingenious*, but you suffer the disgrace of not being *ingenuous;* not only of being a plagiary, but of being a plagiary for trifles. Had the invention been greater it would have disgraced you less; for men have not so contemptible an idea of him that robs for gold on the highway, as of him that can pick pockets for half-pence and farthings. Thus, through envy, jealousy, and the vanity of competitors for fame, the origin of many of the most extraordinary inventions, though produced within but a few centuries past, is involved in doubt and uncertainty. We scarce know to whom we are indebted for the *compass*, and for *spectacles*, nor have even *paper* and *printing*, that record every thing else, been able to preserve with certainty the name and reputation of their inventors. One would not, therefore, of all faculties, or qualities of the mind, wish, for a friend, or a child, that he should have that of invention. For his attempts to benefit mankind in that way, however well imagined, if they do not succeed, expose him, though very unjustly, to general ridicule and contempt; and, if they do succeed, to envy, robbery, and abuse. B. FRANKLIN.

* Dr. F. afterwards thought, that, possibly, the mutual repulsion of the inner opposite sides of the electrised might prevent the accumulating of an electric atmosphere upon them, and occasion it to stand chiefly on the outside. But recommended it to the farther examination of the curious.

Mons. Dalibard, Paris.

Beccaria's work on Electricity.—Sentiments of Franklin on pointed Rods, not fully understood in Europe.—Effect of Lightning on the Church of Newbury, in New England.—Remarks on the subject.—Read at the Royal Society, Dec. 18, 1775.

PHILADELPHIA, June 29, 1755.

You desire my opinion of Père Beccaria's Italian book.* I have read it with much pleasure, and think it one of the best pieces on the subject that I have seen in any language. Yet as to the article of water-spouts, I am not at present of his sentiments; though I must own with you, that he has handled it very ingeniously. Mr. Collinson has my opinion of whirlwinds and water-spouts at large, written some time since. I know not whether they will be published; if not, I will get them transcribed for your perusal.† It does not appear to me that Père Beccaria doubts of the *absolute impermeability of glass* in the sense I meant it; for the instances he gives of holes made through glass by the electric stroke are such as we have all experienced, and only show that the electric fluid could not pass without making a hole. In the same manner we say, glass is impermeable to water, and yet a stream from a fire-engine will force through the strongest panes of a window. As to the effect of points in drawing the electric matter from clouds, and thereby securing buildings, &c. which, you say, he seems to doubt, I must own I think he only speaks modestly and judiciously. I find I have been but partly understood in that matter. I have mentioned it in several of my letters, and except once, always in the *alternative*, *viz.* that pointed rods erected on buildings, and communicating with the moist earth, would either *prevent* a stroke, *or*, if not prevented, would *conduct* it, so as that the building should suffer no damage. Yet whenever my opinion is examined in Europe, nothing is considered but

* This work is written conformable to Dr. Franklin's theory, upon artificial and natural electricity, which compose the two parts of it. It was printed in Italian, at Turin, in 4to. 1753: between the two parts is a letter to the Abbe Nollet, in defence of Dr. Franklin's system.

† These papers will be found in a subsequent part of this volume.

the probability of those rods *preventing* a stroke or explosion, which is only a *part* of the use I proposed for them; and the other part, their conducting a stroke, which they may happen not to prevent, seems to be totally forgotten, though of equal importance and advantage.

I thank you for communicating M. de Buffon's relation of the effect of lightning at Dijon, on the 7th of June last. In return, give me leave to relate an instance I lately saw of the same kind. Being in the town of Newbury, in New England, in November last, I was shown the effect of lightning on their church, which had been struck a few months before. The steeple was a square tower of wood reaching seventy feet up from the ground to the place where the bell hung, over which rose a taper spire, of wood likewise, reaching seventy feet higher, to the vane of the weathercock. Near the bell was fixed an iron hammer to strike the hours: and from the tail of the hammer a wire went down through a small gimlet-hole in the floor that the bell stood upon, and through a second floor in like manner; then horizontally under and near the plastered ceiling of that second floor, till it came near a plastered wall; then down by the side of that wall to a clock, which stood about twenty feet below the bell. The wire was not bigger than a common knitting-needle. The spire was split all to pieces by the lightning, and the parts flung in all directions over the square in which the church stood, so that nothing remained above the bell.

The lightning passed between the hammer and the clock in the above mentioned wire, without hurting either of the floors, or having any effect upon them (except making the gimlet-holes, through which the wire passed, a little bigger,) and without hurting the plastered wall, or any part of the building, so far as the aforesaid wire and the pendulum wire of the clock extended; which latter wire was about the thickness of a goose-quill. From the end of the pendulum, down quite to the ground, the building was exceedingly rent and damaged, and some stones in the foundation-wall torn out, and thrown to the distance of twenty or thirty feet. No part of the afore mentioned long small wire, between the clock and the hammer, could be found, except about two inches that hung to the tail of the hammer, and about as much that was fastened to the clock; the rest being exploded, and its particles dissipated in smoke and air, as gunpowder is by common fire, and had only left a black smutty track on the plastering, three or four inches broad, darkest in the middle, and fainter towards the edges, all along the ceiling, under which it passed, and down the wall. These were the effects and appearances; on which I would only make the few following remarks, viz.

1. That lightning, in its passage through a building, will leave wood to pass as far as it can in metal, and not enter the wood again till the conductor of metal ceases.

And the same I have observed in other instances, as to walls of brick or stone.

2. The quantity of lightning that passed through this steeple must have been very great, by its effects on the lofty spire above the bell, and on the square tower all below the end of the clock pendulum.

3. Great as this quantity was, it was conducted by a small wire and a clock pendulum, without the least damage to the building so far as they extended.

4. The pendulum rod being of a sufficient thickness, conducted the lightning without damage to itself; but the small wire was utterly destroyed.

5. Though the small wire was itself destroyed, yet it had conducted the lightning with safety to the building.

6. And from the whole it seems probable, that if even such a small wire had been extended from the spindle of the vane to the earth, before the storm, no damage would have been done to the steeple by that stroke of lightning, though the wire itself had been destroyed.

To Peter Collinson.

PHILADELPHIA, Nov. 23, 1753.

DEAR FRIEND,—In my last, via Virginia, I promised to send you per next ship, a small philosophical packet: but now having got the materials (old letters and rough drafts) before me, I fear you will find it a great one. Nevertheless, as I am like to have a few days' leisure before this ship sails, which I may not have again in a long time, I shall transcribe the whole, and send it; for you will be under no necessity of reading it all at once, but may take it a little at a time, now and then of a winter evening. When you happen to have nothing else to do (if that ever happens) it may afford you some amusement.*

B. FRANKLIN.

* These letters and papers are a philosophical correspondence between Dr. Franklin and some of his American friends.† Mr. Collinson communicated them to the Royal Society, where they were read at different meetings during the year 1756. But Dr. Franklin having particularly requested that they might not be printed, none of them were inserted in the transactions. He had at that time an intention of revising them, and pursuing some of the inquiries farther; but finding that he was not likely to have sufficient leisure, he was at length induced, imperfect as they were, to permit their publication, as some of the hints they contain might possibly be useful to others in their philosophical researches. Note in Mr. Collinson's edition.

† As some of these papers are upon subjects not immediately connected with electricity, we have taken such papers from the order in which they were placed by Mr. Collinson, and transferred them to other parts of this edition.

Extract of a letter from Mr. Bowdoin of Boston to Benjamin Franklin, concerning the crooked direction and the source of lightning, and the swiftness of the electric fire.

BOSTON, Dec. 21, 1751.

THE experiments Mr. K. has exhibited here, have been greatly pleasing to all sorts of people that have seen them; and I, hope, by the time he returns to Philadelphia, his tour this way will turn to good account. His experiments are very curious, and I think prove most effectually your doctrine of electricity; that it is a real element, annexed to, and diffused among all bodies we are acquainted with; that it differs in nothing from lightning, the effects of both being similar, and their properties, so far as they are known, the same, &c.

The remarkable effect of lightning on iron, lately discovered, in giving it the magnetic virtue, and the same effect produced on small needles by the electrical fire, is a further and convincing proof that they are both the same element; but, which is very unaccountable, Mr. K. tells me, it is necessary to produce this effect, that the direction of the needle and the electric fire should be north and south; from either to the other, and that just so far as they deviate therefrom, the magnetic power in the needle is less, till their direction being at right angles with the north and south, the effect entirely ceases. We made at Faneuil Hall, where was Mr. K.'s apparatus, several experiments, to give some small needles the magnetic virtue; previously examining, by putting them in water, on which they will be supported, whether or not they had any of that virtue; and I think we found all of them to have some small degree of it, their points turning to the north; we had nothing to do then but to invert the poles, which accordingly was done, by sending through them the charge of two large glass jars; the eye of the needle turning to the north, as the point before had done: that end of the needle which the fire is thrown upon, Mr. K. tells me always points to the north.

The electrical fire passing through air has the same crooked direction as lightning.* This appearance I endeavour to account for thus: air is an electric *per se*, therefore there must be a mutual repulsion betwixt air and the electrical fire. A column or cylinder of air, having the diameter of its base equal to the diameter of the electrical spark, intervenes that part of the body which the spark is taken from, and of the body it aims at. The spark acts upon this column, and is acted upon by it, more strongly than any other neighbouring portion of air.

* This is most easily observed in large strong sparks taken at some inches distance.

The column, being thus acted upon, becomes more dense, and, being more dense repels the spark more strongly; its repellency being in proportion to its density: having acquired, by being condensed, a degree of repellency greater than its natural, it turns the spark out of its straight course; the neighbouring air, which must be less dense, and therefore has a smaller degree of repellency, giving it a more ready passage.

The spark, having taken a new direction, must now act on, or most strongly repel the column of air which lies in that direction, and consequently must condense that column in the same manner as the former, when the spark must again change its course, which course will be thus repeatedly changed, till the spark reaches the body that attracted it.

To this account one objection occurs; that as air is very fluid and elastic, and so endeavours to diffuse itself equally, the supposed accumulated air within the column aforesaid, would be immediately diffused among the contiguous air, and circulate to fill the space it was driven from: and consequently that the said column, on the greater density of which the phenomenon is supposed to depend, would not repel the spark more strongly than the neighbouring air.

This might be an objection, if the electrical fire was as sluggish and inactive as air. Air takes a sensible time to diffuse itself equally, as is manifest from winds which often blow for a considerable time together from the same point, and with a velocity even in the greatest storms, not exceeding, as it is said, sixty miles an hour: but the electric fire seems propagated instantaneously, taking up no perceptible time in going very great distances. It must then be an inconceivable short time in its progress from an electrified to an unelectrified body, which, in the present case, can be but a few inches apart: but this small portion of time is not sufficient for elasticity of the air to exert itself, and therefore the column aforesaid must be in a denser state than its neighbouring air.

About the velocity of the electric fire more is said below, which perhaps may more fully obviate this objection. But let us have recourse to experiments. Experiments will obviate all objections, or confound the hypothesis. The electric spark, if the foregoing be true, will pass through a vacuum in a right line. To try this, let a wire be fixed perpendicularly on the plate of an air pump, having a leaden ball on its upper end; let another wire, passing through the top of a receiver, have on each end a leaden ball; let the leaden balls within the receiver, when put on the air pump, be within two or three inches of each other; the receiver being exhausted, the spark given from a charged phial to the upper wire will pass through rarified air, nearly approaching to a vacuum, to the

lower wire, and I suppose in a right line, or nearly so; the small portion of air remaining in the receiver, which cannot be entirely exhausted, may possibly cause it to deviate a little, but perhaps not sensibly from a right line. The spark also might be made to pass through air greatly condensed, which perhaps would give a still more crooked direction. I have not had opportunity to make any experiments of this sort, not knowing of an air-pump nearer than Cambridge, but you can easily make them. If these experiments answer, I think the crooked direction of lightning will be also accounted for.

With respect to your letters on electricity; your hypothesis in particular for explaining the phenomena of lightning is very ingenious. That some clouds are highly charged with electrical fire, and that their communicating it to those that have less, to mountains and other eminences, makes it visible and audible, when it is denominated lightning and thunder, is highly probable; but that the sea, which you suppose the grand source of it, can collect it, I think admits of a doubt; for though the sea be composed of salt and water, an electric *per se* and non-electric, and though the friction of electrics *per se* and non-electrics, will collect that fire, yet it is only under certain circumstances which water will not admit. For it seems necessary, that the electrics *per se* and non-electrics rubbing one another, should be of such substances as will not adhere to, or incorporate with each other. Thus a glass or sulphur sphere turned in water, and so a friction between them, will not collect any fire; nor, I suppose, would a sphere of salt revolving in water: the water adhering to, or incorporating with those electrics *per se*. But granting that the friction between salt and water would collect the electrical fire; that fire, being so extremely subtle and active, would be immediately communicated, either to those lower parts of the sea from which it was drawn, and so only perform quick revolutions; or be communicated to the adjacent islands or continent, and so be diffused instantaneously through the general mass of the earth. I say instantaneously, for the greatest distances we can conceive within the limits of our globe, even that of the two most opposite points, it will take no sensible time in passing through; and therefore it seems a little difficult to conceive how there can be any accumulation of the electrical fire upon the surface of the sea, or how the vapours arising from the sea should have a greater share of that fire than other vapours.

That the progress of the electrical fire is so amazingly swift, seems evident from an experiment you yourself (not out of choice) made, when two or three large glass jars were discharged through your body. You neither heard the crack, was sensible of the stroke, nor, which is more extraordinary, saw the light; which gave you just reason to conclude, that it was swifter than sound, than animal sensation, and even light itself. Now light (as astronomers have demonstrated) is about six minutes passing from the sun to the earth; a distance, they say, of more than eighty millions of miles. The greatest rectilinear distance within the compass of the earth is about eight thousand miles, equal to its diameter. Supposing then, that the velocity of the electric fire be the same as that of light, it will go through a space equal to the earth's diameter in about two sixtieths of the second of a minute. It seems inconceivable then, that it should be accumulated upon the sea, in its present state, which, as it is a non-electric, must give the fire an instantaneous passage to the neighbouring shores, and they convey it to the general mass of the earth. But such accumulation seems still more inconceivable when the electrical fire has but few feet depth of water to penetrate, to return to the place from whence it is supposed to be collected.

Your thoughts upon these remarks I shall receive with a great deal of pleasure. I take notice that in the printed copies of your letters, several things are wanting which are in the manuscript you sent me. I understand by your son, that you had writ, or was writing, a paper on the effect of the electrical fire on loadstones, needles, &c. which I would ask the favour of a copy of, as well as of any other papers on electricity, written since I had the manuscript, for which I repeat my obligations to you. J. BOWDOIN.

J. Bowdoin, Boston.

Observations on the subjects of the preceding letter. —Reasons for supposing the sea to be the grand source of Lightning.— Reasons for doubting this hypothesis.—Improvement in a globe for raising the Electric Fire.—Read at the Royal Society, May 27, 1756.

PHILADELPHIA, Jan. 24, 1752.

I AM glad to learn, by your favour of the 21st past, that Mr. Kinnersley's lectures have been acceptable to the gentlemen of Boston, and are like to prove serviceable to himself.

I thank you for the countenance and encouragement you have so kindly afforded my fellow-citizen.

I send you enclosed an extract of a letter containing the substance of what I observed concerning the communication of magnetism to needles by electricity. The minutes I took at the time of the experiments are mislaid. I am very little acquainted with the nature of magnetism. Dr. Gawin Knight, inventor of the steel magnets, has wrote largely on that subject, but I have not yet had leisure to peruse his writings with the attention necessary to become master of his doctrine.

Your explication of the crooked direction of lightning appears to me both ingenious and solid. When we can account as satisfactorily for the electrification of clouds, I think that branch of natural philosophy will be nearly complete.

The air, undoubtedly, obstructs the motion of the electric fluid. Dry air prevents the dissipation of an electric atmosphere, the denser the more, as in cold weather. I question whether such an atmosphere can be retained by a body *in vacuo*. A common electrical phial requires a non-electric communication from the wire to every part of the charged glass; otherwise, being dry and clean, and filled with air only, it charges slowly, and discharges gradually, by sparks, without a shock: but exhausted of air, the communication is so open and free between the inserted wire and surface of the glass, that it charges as readily, and shocks as smartly as if filled with water: and I doubt not, but that in the experiment you propose, the sparks would not only be near strait *in vacuo*, but strike at a greater distance than in the open air, though perhaps there would not be a loud explosion. As soon as I have a little leisure, I will make the experiment, and send you the result.

My supposition, that the sea might possibly be the grand source of lightning, arose from the common observation of its luminous appearance in the night, on the least motion; an appearance never observed in fresh water. Then I knew that the electric fluid may be pumped up out of the earth, by the friction of a glass globe, on a non-electric cushion; and that notwithstanding the surprising activity and swiftness of that fluid, and the non-electric communication between all the parts of the cushion and the earth, yet quantities would be snatched up by the revolving surface of the globe, thrown on the prime conductor, and dissipated in air. How this was done, and why that subtle active spirit did not immediately return again from the globe, into some part or other of the cushion, and so into the earth, was difficult to conceive; but whether from its being opposed by a current setting upwards to the cushion, or from whatever other cause, that it did not so return was an evident fact. Then I considered the separate particles of water as so many hard spherules, capable of touching the salt only in points, and imagined a particle of salt could therefore no more be wet by a particle of water, than a globe by a cushion; that there might therefore be such a friction between these originally constituent particles of salt and water, as in a sea of globes and cushions; that each particle of water on the surface might obtain from the common mass, some particles of the universally diffused much finer, and more subtle electric fluid, and forming to itself an atmosphere of those particles, be repelled from the then generally electrified surface of the sea, and fly away with them into the air. I thought too, that possibly the great mixture of particles electric *per se*, in the ocean water, might, in some degree, impede the swift motion and dissipation of the electric fluid through it to the shores, &c.—But having since found, that salt in the water of an electric phial does not lessen the shock; and having endeavoured in vain to produce that luminous appearance from a mixture of salt and water agitated; and observed, that even the sea-water will not produce it after some hours standing in a bottle; I suspect it to proceed from some principle yet unknown to us (which I would gladly make some experiments to discover, if I lived near the sea) and I grow more doubtful of my former supposition, and more ready to allow weight to that objection (drawn from the activity of the electric fluid, and the readiness of water to conduct) which you have indeed stated with great strength and clearness.

In the mean time, before we part with this hypothesis, let us think what to substitute in its place. I have sometimes queried whether the friction of the air, an electric *per se*, in violent winds, among trees, and against the surface of the earth, might not pump up, as so many glass globes, quantities of the electric fluid, which the rising vapours might receive from the air, and retain in the clouds they form? on which I should be glad to have your sentiments. An ingenious friend of mine supposes the land-clouds more likely to be electrified than the sea-clouds. I send his letter for your perusal, which please to return me.

I have wrote nothing lately on electricity, nor observed any thing new that is material, my time being much taken up with other affairs. Yesterday I discharged four jars through a fine wire, tied up between two strips of glass: the wire was in part melted, and the rest broke into small pieces from half an inch long, to half a quarter of an inch. My globe raises the electric fire with greater ease, in much greater quantities, by the means of a wire extended from the cushion, to the iron pin of a pump handle behind my house, which communicates by the pump spear with the water in the well.

By this post I send to ****, who is curious in that way, some meteorological observations and conjectures, and desire him to communicate them to you, as they may afford you some amusement, and I know you will look over them with a candid eye. By throwing our occasional thoughts on paper, we more readily discover the defects of our opinions, or we digest them better and find new arguments to support them. This I sometimes practise: but such pieces are fit only to be seen by friends.

B. FRANKLIN.

J. Bowdoin to Benjamin Franklin.

Effect of Lightning on Captain Waddel's Compass, and the Dutch Church at New York.—Read at the Royal Society, June 3, 1752.

Boston, March 2, 1752.

I HAVE received your favour of the 24th of January past, enclosing an extract from your letter to Mr. Collinson, and ****'s letter to yourself, which I have read with a great deal of pleasure, and am much obliged to you for. Your extract confirms a correction Mr. Kinnersley made a few days ago, of a mistake I was under respecting the polarity given to needles by electrical fire, "that the end which receives the fire always points north;" and "that the needle being situated east and west will not have a polar direction." You find, however, the polarity strongest when the needle is shocked lying north and south; weakest when lying east and west; which makes it probable that the communicated magnetism is less, as the needle varies from a north and south situation. As to the needle of captain Waddel's compass, if its polarity was reversed by the lightning, the effect of lightning and electricity, in regard of that, seems dissimilar; for a magnetic needle in a north and south situation (as the compass needle was) instead of having its power reversed, or even diminished, would have it confirmed or increased by the electric fire. But perhaps the lightning communicated to some nails in the binnacle (where the compass is placed) the magnetic virtue, which might disturb the compass.

This I have heard was the case; if so, the seeming dissimilarity vanishes: but this remarkable circumstance (if it took place) I should think would not be omitted in captain Waddel's account.

I am very much pleased that the explication I sent you, of the crooked direction of lightning, meets with your approbation.

As to your supposition about the source of lightning, the luminous appearance of the sea in the night, and the similitude between the friction of the particles of salt and water, as you considered them in their original separate state, and the friction of the globe and cushion, very naturally led you to the ocean, as the grand source of lightning: but the activity of lightning, or the electric element, and the fitness of water to conduct it, together with the experiments you mention of salt and water, seem to make against it, and to prepare the way for some other hypothesis. Accordingly you propose a new one, which is very curious, and not so liable, I think, to objections as the former. But there is not, as yet, I believe, a sufficient variety of experiments to establish any theory, though this seems the most hopeful of any I have heard of.

The effect which the discharge of your four glass jars had upon a fine wire, tied between two strips of glass, puts me in mind of a very similar one of lightning, that I observed at New York, October, 1750, a few days after I left Philadelphia. In company with a number of gentlemen, I went to take a view of the city from the Dutch church steeple, in which is a clock about twenty or twenty-five feet below the bell. From the clock went a wire through two floors, to the clock-hammer near the bell, the holes in the floor for the wire being perhaps about a quarter of an inch diameter. We were told, that in the spring of 1750, the lightning struck the clock hammer, and descended along the wire to the clock, melting in its way several spots of the wire, from three to nine inches long, through one third of its substance, till coming within a few feet of the lower end, it melted the wire quite through, in several places, so that it fell down in several pieces; which spots and pieces we saw. When it got to the end of the wire, it flew off to the hinge of a door, shattered the door, and dissipated. In its passage through the holes of the floors it did not do the least damage, which evidences that wire is a good conductor of lightning (as it is of electricity) provided it be substantial enough, and might, in this case, had it been continued to the earth, have conducted it without damaging the building.*

Your information about your globe's raising the electric fire in greater quantities, by means of a wire extended from the cushion to the earth, will enable me, I hope, to remedy a great inconvenience I have been under, to collect the fire with the electrifying glass I use, which is fixed in a very dry room, three stories from the ground. When you send your meteorological observations to ****, I hope I shall have the pleasure of seeing them.

J. BOWDOIN.

Proposal of an experiment to measure the time taken up by an Electric Spark in moving through any given space. By James Alexander, of New York.—Read at the Royal Society, Dec. 26, 1756.

IF I remember right, the Royal Society made one experiment to discover the velocity

* The wire mentioned in this account was replaced by a small brass chain. In the summer of 1763, the lightning again struck that steeple, and from the clock-hammer near the bell, it pursued the chain as it had before done the wire, went off to the same hinge, and again shattered the same door. In its passage through the same holes of the same floors, it did no damage to the floors, nor to the building during the whole extent of the chain. But the chain itself was destroyed, being partly scattered about in fragments of two or three links melted and stuck together, and partly blown up or reduced to smoke, and dissipated. [See an account of the same effect of lightning on a wire at Newbury, p. 296.] The steeple, when repaired, was guarded by an iron conductor, or rod, extending from the foot of the vane-spindle down the outside of the building, into the earth

of the electric fire, by a wire of about four miles in length, supported by silk, and by turning it forwards and backwards in a field, so that the beginning and end of the wire were at only the distance of two people, the one holding the Leyden bottle and the beginning of the wire, and the other holding the end of the wire and touching the ring of the bottle; but by this experiment no discovery was made, except that the velocity was extremely quick.

As water is a conductor as well as metals, it is to be considered whether the velocity of the electric fire might not be discovered by means of water; whether a river, or lake, or sea, may not be made part of the circuit through which the electric fire passes? instead of the circuit all of wire, as in the above experiment.

Whether in a river, lake, or sea, the electric fire will not dissipate and not return to the bottle? or, will it proceed in strait lines through the water the shortest courses possible back to the bottle?

If the last, then suppose one brook that falls into Delaware doth head very near to a brook that falls into Schuylkill, and let a wire be stretched and supported as before, from the head of the one brook to the head of the other, and let the one end communicate with the water, and let one person stand in the other brook, holding the Leyden bottle, and let another person hold that end of the wire not in the water, and touch the ring of the bottle.—If the electric fire will go as in the last question, then will it go down the one brook to Delaware or Schuylkill, and down one of them to their meeting, and up the other brook; the time of its doing this may possibly be observable, and the further upwards the brooks are chosen, the more observable it would be.

Should this be not observable, then suppose the two brooks falling into Susquehanna and Delaware, and proceeding as before, the electric fire may, by that means, make a circuit round the North Cape of Virginia, and go many hundred miles, and in doing that, it would seem it must take some observable time.

If still no observable time is found in that experiment, then suppose the brooks falling the one into the Ohio, and the other into Susquehanna, or Potowmac, in that the electric fire would have a circuit of some thousands of miles to go down the Ohio to Mississippi, to the Bay of Mexico, round Florida, and round the South Cape of Virginia; which, I think, would give some observable time, and discover exactly the velocity.

But if the electric fire dissipates, or weakens in the water, as I fear it does, these experiments will not answer.

The newspapers have mentioned, that in 1765, the lightning fell a third time on the same steeple, and was safely conducted by the rod, but the particulars are not come to hand.

Answer to the foregoing.—Read at the Royal Society, Dec. 25, 1756.

Suppose a tube of any length open at both ends, and containing a moveable wire of just the same length, that fills its bore. If I attempt to introduce the end of another wire into the same tube, it must be done by pushing forward the wire it already contains; and the instant I press and move one end of that wire, the other end is also moved, and introducing one inch of the same wire, I extrude, at the same time, an inch of the first, from the other end of the tube.

If the tube be filled with water, and I inject an additional inch of water at one end, I force out an equal quantity at the other in the very same instant.

And the water forced out at one end of the tube is not the very same water that was forced in at the other end at the same time, it was only in motion at the same time.

The long wire, made use of in the experiment to discover the velocity of the electric fluid, is itself filled with what we call its natural quantity of that fluid, before the hook of the Leyden bottle is applied to one end of it.

The outside of the bottle being at the time of such application in contact with the other end of the wire, the whole quantity of electric fluid contained in the wire is, probably, put in motion at once.

For at the instant the hook, connected with the inside of the bottle, *gives out;* the coating or outside of the bottle, *draws in* a portion of that fluid.

If such long wire contains precisely the quantity that the outside of the bottle demands, the whole will move out of the wire to the outside of the bottle, and the over quantity which the inside of the bottle contained, being exactly equal, will flow into the wire, and remain there, in the place of the quantity the wire had just parted with to the outside of the bottle.

But if the wire be so long as that one tenth (suppose) of its natural quantity is sufficient to supply what the outside of the bottle demands, in such a case the outside will only receive what is contained in one tenth of the wire's length, from the end next to it; though the whole will move so as to make room at the other end for an equal quantity issuing, at the same time, from the inside of the bottle.

So that this experiment only shows the extreme facility with which the electric fluid moves in metal; it can never determine the velocity.

And, therefore, the proposed experiment (though well imagined, and very ingenious) of sending the spark round through a vast length of space, by the waters of Susquehanna, or Potowmac, and Ohio, would not afford the satisfaction desired, though we could be sure that the motion of the electric fluid would be

in that tract, and not under ground in the wet earth by the shortest way.

B. FRANKLIN.

Mr. Kinnersley to B. Franklin.

Experiments on boiling Water, and glass heated by boiling water.—Doctrine of repulsion in electrised bodies doubted.—Electricity of the atmosphere at different heights.—Electrical Horse-race.—Electrical thermometer.—In what cases the electrical fire produces heat.—Wire lengthened by Electricity.—Good effect of a rod on the house of Mr. West, of Philadelphia.

PHILADELPHIA, March 12, 1761.

HAVING lately made the following experiments, I very cheerfully communicate them, in hopes of giving you some degree of pleasure, and exciting you to further explore your favourite, but not quite exhausted subject, *electricity*.

I placed myself on an electric stand, and, being well electrised, threw my hat to an unelectrised person, at a considerable distance, on another stand, and found that the hat carried some of the electricity with it; for, upon going immediately to the person who received it, and holding a flaxen thread near him, I perceived he was electrised sufficiently to attract the thread.

I then suspended, by silk, a broad plate of metal, and electrised some boiling water under it at about four feet distance, expecting that the vapour, which ascended plentifully to the plate, would, upon the principle of the foregoing experiment, carry up some of the electricity with it; but was at length fully convinced, by several repeated trials, that it left all its share thereof behind. This I know not how to account for; but does it not seem to corroborate your hypothesis, that the vapours of which the clouds are formed, leave their share of electricity behind, in the common stock, and ascend in the negative state?

I put boiling water into a coated Florence flask, and found that the heat so enlarged the pores of the glass, that it could not be charged. The electricity passed through as readily, to all appearance, as through metal; the charge of a three-pint bottle went freely through, without injuring the flask in the least. When it became almost cold, I could charge it as usual. Would not this experiment convince the Abbé Nollet of his egregious mistake? For while the electricity went fairly through the glass, as he contends it always does, the glass could not be charged at all.

I took a slender piece of cedar, about eighteen inches long, fixed a brass cap in the middle, thrust a pin horizontally and at right angles, through each end (the points in contrary directions) and hung it, nicely balanced, like the needle of a compass, on a pin, about six inches long, fixed in the centre of an electric stand. Then electrising the stand, I had the pleasure of seeing what I expected; the wooden needle turned round, carrying the pins with their heads foremost. I then electrised the stand negatively, expecting the needle to turn the contrary way, but was extremely disappointed, for it went still the same way as before. When the stand was electrised positively, I suppose that the natural quantity of electricity in the air being increased on one side, by what issued from the points, the needle was attracted by the lesser quantity on the other side. When electrised negatively, I suppose that the natural quantity of electricity in the air was diminished near the points; in consequence whereof, the equilibrium being destroyed, the needle was attracted by the greater quantity on the opposite side.

The doctrine of repulsion, in electrised bodies, I begin to be somewhat doubtful of. I think all the phenomena on which it is founded, may be well enough accounted for without it. Will not cork balls, electrised negatively, separate as far as when electrised positively? And may not their separation in both cases be accounted for upon the same principle, namely, the mutual attraction of the natural quantity in the air, and that which is denser or rarer in the cork balls? it being one of the established laws of this fluid, that quantities of different densities shall mutually attract each other, in order to restore the equilibrium.

I can see no reason to conclude that the air has not its share of the common stock of electricity, as well as glass, and perhaps, all other electrics *per se*. For though the air will admit bodies to be electrised in it either positively or negatively, and will not readily carry off the redundancy in the one case, nor supply the deficiency in the other, yet let a person in the negative state, out of doors in the dark, when the air is dry, hold, with his arm extended, a long sharp needle, pointing upwards, and he will soon be convinced that electricity may be drawn out of the air; not very plentifully, for, being a bad conductor, it seems loth to part with it, but yet some will evidently be collected. The air near the person's body having less than its natural quantity, will have none to spare; but, his arm being extended, as above, some will be collected from the remoter air, and will appear luminous, as it converges to the point of the needle.

Let a person electrised negatively present the point of a needle, horizontally, to a cork ball, suspended by silk, and the ball will be attracted towards the point, till it has parted with so much of its natural quantity of electricity as to be in the negative state, in the same degree with the person who holds the needle; then it will recede from the point, be-

ing, as I suppose, attracted the contrary way by the electricity of greater density in the air behind it. But, as this opinion seems to deviate from electrical orthodoxy, I should be glad to see these phenomena better accounted for by your superior and more penetrating genius.

Whether the electricity in the air, in clear dry weather, be of the same density at the height of two or three hundred yards, as near the surface of the earth, may be satisfactorily determined by your old experiment of the kite. The twine should have throughout a very small wire in it, and the ends of the wire, where the several lengths are united, ought to be tied down with a waxed thread, to prevent their acting in the manner of points. I have tried the experiment twice, when the air was as dry as we ever have it, and so clear that not a cloud could be seen, and found the twine each time in a small degree electrised positively. The kite had three metalline points fixed to it: one on the top, and one on each side. That the twine was electrised, appeared by the separating of two small cork balls, suspended on the twine by fine flaxen threads, just above where the silk was tied to it, and sheltered from the wind. That the twine was electrised positively, was proved, by applying it to the wire of a charged bottle, which caused the balls to separate further, without first coming nearer together. This experiment showed, that the electricity in the air, at those times, was denser above than below. But that cannot be always the case; for you know we have frequently found the thunder-clouds in the negative state, attracting electricity from the earth: which state, it is probable, they are always in when first formed, and till they have received a sufficient supply. How they come afterwards, towards the latter end of the gust, to be in the positive state, which is sometimes the case, is a subject for further inquiry.

After the above experiments with the wooden needle, I formed a cross, of two pieces of wood, of equal length, intersecting each other at right angles in the middle, hung it horizontally upon a central pin, and set a light horse with his rider, upon each extremity; whereupon, the whole being nicely balanced, and each courser urged on by an electrised point of a pair of spurs, I was entertained with an electrical horse-race.

I have contrived an electrical air thermometer, and made several experiments with it, that have afforded me much satisfaction and pleasure. It is extremely sensible of any alteration in the state of the included air, and fully determines that controverted point, Whether there be any heat in the electric fire? By the enclosed draught, and the following description, you will readily apprehend the construction of it. (See the Plate.)

A B is a glass tube, about eleven inches long, and one inch diameter in the bore. It has a brass ferrule cemented on each end, with a top and bottom part, C and D, to be screwed on, air-tight, and taken off at pleasure. In the centre of the bottom part D, is a male screw, which goes into a brass nut, in the mahogany pedestal E. The wires F and G are for the electric fire to pass through, darting from one to the other. The wire G extends through the pedestal to H, and may be raised and lowered by means of a male screw on it. The wire F may be taken out, and the hook I be screwed into its place. K is a glass tube, with a small bore, open at both ends, cemented in the brass tube L, which screws into the top part C. The lower end of the tube K is immersed in water, coloured with cochineal, at the bottom of the tube A B. (I used, at first, coloured spirits of wine, but in one experiment I made, it took fire.) On the top of the tube K is cemented, for ornament, a brass ferrule, with a head screwed on it, which has a small air-hole through its side, at *a*. The wire *b*, is a small round spring, that embraces the tube K, so as to stay wherever it is placed. The weight M is to keep strait whatever may be suspended in the tube A B, on the hook I. Air must be blown through the tube K, into the tube A B, till enough is intruded to raise, by its elastic force, a column of the coloured water in the tube K, up to *c*, or thereabouts; and then, the gage-wire *b*, being slipt down to the top of the column, the thermometer is ready for use.

I set the thermometer on an electric stand, with the chain N fixed to the prime conductor, and kept it well electrised a considerable time; but this produced no sensible effect; which shows, that the electric fire, when in a state of rest, has no more heat than the air, and other matter wherein it resides.

When the wires F and G are in contact, a large charge of electricity sent through them, even that of my case of five and thirty bottles containing above thirty square feet of coated glass, will produce no rarification of the air included in the tube A B; which shows that the wires are not heated by the fire's passing through them.

When the wires are about two inches apart, the charge of a three pint bottle, darting from one to the other, rarifies the air very evidently; which shows, I think, that the electric fire must produce heat in itself, as well as in the air, by its rapid motion.

The charge of one of my glass jars (which will contain about five gallons and a half, wine measure) darting from wire to wire, will, by the disturbance it gives the air, re-

pelling it in all directions, raise the column in the tube K, up to *d*, or thereabouts; and the charge of the above-mentioned case of bottles will raise it to the top of the tube.—Upon the air's coalescing, the column, by its gravity, instantly subsides, till it is in equilibrio with the rarefied air; it then gradually descends as the air cools, and settles where it stood before. By carefully observing at what height above the gage-wire *b*, the descending column first stops, the degree of rarefaction is discovered, which, in great explosions, is very considerable.

I hung in the thermometer, successively, a strip of wet writing paper, a wet flaxen and woollen thread, a blade of green grass, a filament of green wood, a fine silver thread, a very small brass wire, and a strip of gilt paper; and found that the charge of the abovementioned glass jar, passing through each of these, especially the last, produced heat enough to rarefy the air very perceptibly.

I then suspended, out of the thermometer, a piece of small harpsichord wire, about twenty-four inches long, with a pound weight at the lower end, and sent the charge of the case of five and thirty bottles through it, whereby I discovered a new method of wire-drawing. The wire was red hot the whole length, well annealed, and above an inch longer than before. A second charge melted it; it parted near the middle, and measured, when the ends were put together, four inches longer than at first. This experiment, I remember, you proposed to me before you left Philadelphia; but I never tried it till now.—That I might have no doubt of the wire's being *hot* as well as red, I repeated the experiment on another piece of the same wire encompassed with a goose-quill, filled with loose grains of gunpowder; which took fire as readily as if it had been touched with a red hot poker. Also tinder, tied to another piece of the wire, kindled by it. I tried a wire about three times as big, but could produce no such effects with that.

Hence it appears that the electric fire, though it has no sensible heat when in a state of rest, will, by its violent motion, and the resistance it meets with, produce heat in other bodies when passing through them, provided they be small enough. A large quantity will pass through a large wire, without producing any sensible heat; when the same quantity passing through a very small one, being there confined to a narrower passage, the particles crowding closer together, and meeting with greater resistance, will make it red hot, and even melt it.

Hence lightning does not melt metal by a cold fusion, as we formerly supposed; but, when it passes through the blade of a sword, if the quantity be not very great, it may heat the point so as to melt it, while the broadest and thickest part may not be sensibly warmer than before.

And when trees or houses are set on fire by the dreadful quantity which a cloud, or the earth, sometimes discharges, must not the heat, by which the wood is first kindled, be generated by the lightning's violent motion, through the resisting combustible matter?

If lightning, by its rapid motion, produces heat in *itself*; as well as in other bodies (and that it does I think is evident from some of the foregoing experiments made with the thermometer) then its sometimes singeing the hair of animals killed by it, may easily be accounted for. And the reasons of its not always doing so, may, perhaps, be this: the quantity, though sufficient to kill a large animal, may sometimes not be great enough, or not have met with resistance enough, to become, by its motion, burning hot.

We find that dwelling-houses, struck with lightning, are seldom set on fire by it; but when it passes through barns, with hay or straw in them, or store-houses, containing large quantities of hemp, or such like matter, they seldom, if ever, escape a conflagration; which may, perhaps, be owing to such combustibles being apt to kindle with a less degree of heat than is necessary to kindle wood.

We had four houses in this city, and a vessel at one of the wharfs, struck and damaged by lightning last summer. One of the houses was struck twice in the same storm. But I have the pleasure to inform you, that your method of preventing such terrible disasters, has, by a fact which had like to have escaped our knowledge, given a very convincing proof of its great utility, and is now in higher repute with us than ever.

Hearing, a few days ago, that Mr. William West, merchant in this city, suspected that the lightning in one of the thunder-storms last summer had passed through the iron conductor, which he had provided for the security of his house; I waited on him, to inquire what ground he might have for such suspicion. Mr. West informed me, that his family and neighbours were all stunned with a very terrible explosion, and that the flash and crack were seen and heard at the same instant. Whence he concluded, that the lightning must have been very near, and, as no house in the neighbourhood had suffered by it, that it must have passed through his conductor. Mr. White, his clerk, told me that he was sitting at the time, by a window about two feet distant from the conductor, leaning against the brick wall with which it was in contact; and that he felt a smart sensation like an electric shock, in that part of the body which touched the wall. Mr. West further informed me, that a person of undoubted veracity assured him, that, being in the door of an opposite house, on the other side of Wa-

ter-street (which you know is but narrow) he saw the lightning diffused over the pavement which was then very wet with rain, to the distance of two or three yards from the foot of the conductor; and that another person of very good credit told him, that he being a few doors off on the other side of the street, saw the lightning above, darting in such direction that it appeared to him to be directly over that pointed rod.

Upon receiving this information, and being desirous of further satisfaction, there being no traces of the lightning to be discovered in the conductor, as far as we could examine it below, I proposed to Mr. West our going to the top of the house, to examine the pointed rod, assuring him, that if the lightning had passed through it, the point must have been melted; and to our great satisfaction, we found it so. This iron rod extended in height about nine feet and a half above a stack of chimnies to which it was fixed (though I suppose three or four feet would have been sufficient.) It was somewhat more than half an inch diameter in the thickest part, and tapering to the upper end. The conductor, from the lower end of it to the earth, consisted of square iron nail rods, not much above a quarter of an inch thick, connected together by interlinking joints. It extended down the cedar roof to the eaves, and from thence down the wall of the house, four story and a half, to the pavement in Water-street, being fastened to the wall in several places by small iron hooks. The lower end was fixed to a ring in the top of an iron stake that was drove about four or five feet into the ground.

The above-mentioned iron rod had a hole in the top of it, about two inches deep, wherein was inserted a brass wire, about two lines thick, and when first put there, about ten inches long, terminating in a very acute point; but now its whole length was no more than seven inches and a half, and the top very blunt. Some of the metal appears to be missing, the slenderest part of the wire being, as I suspect, consumed into smoke. But some of it, where the wire was a little thicker, being only melted by the lightning, sunk down, while in a fluid state, and formed a rough irregular cap, lower on one side than the other, round the upper end of what remained, and became intimately united therewith.

This was all the damage that Mr. West sustained by a terrible stroke of lightning; a most convincing proof of the great utility of this method of preventing its dreadful effects. Surely it will now be thought as expedient [illegible]ide conductors for the lightning, as for

[illegible]est was so good as to make me a [illegible] the melted wire, which I keep as [illegible]riosity, and long for the pleasure of [illegible]: to you. In the mean time, I beg your acceptance of the best representation I can give of it, which you will find by the side of the thermometer, drawn in its full dimensions as it now appears. The dotted lines above are intended to show the form of the wire before the lightning melted it.

And now, sir, I most heartily congratulate you on the pleasure you must have in finding your great and well grounded expectations so far fulfilled. May this method of security from the destructive violence of one of the most awful powers of nature meet with such further success, as to induce every good and greatful heart to bless God for the important discovery! May the benefit thereof be diffused over the whole globe! May it extend to the latest posterity of mankind, and make the name of FRANKLIN, like that of NEWTON, *immortal*.

EBEN. KINNERSLEY.

To Mr. Kinnersley.

Answer to some of the foregoing subjects.—How long the Leyden bottle may be kept charged.—Heated glass rendered permeable by the electric fluid.—Electrical attraction and repulsion.—Reply to other subjects in the preceding paper.—Numerous ways of kindling fire.—Explosion of water.—Knobs and points.

LONDON, February 20, 1762.

I RECEIVED your ingenious letter of the 12th of March last, and thank you cordially for the account you give me of the new experiments you have lately made in electricity.—It is a subject that still affords me pleasure, though of late I have not much attended to it.

Your second experiment, in which you attempted, without success, to communicate positive electricity by vapour ascending from the electrised water, reminds me of one I formerly made, to try if negative electricity might be produced by evaporation only. I placed a large heated brass plate, containing four or five square feet on an electric stand: a rod of metal, about four feet long, with a bullet at its end, extended from the plate horizontally. A light lock of cotton, suspended by a fine thread from the ceiling, hung opposite to, and within an inch of the bullet. I then sprinkled the heated plate with water, which arose fast from it in vapour. If vapour should be disposed to carry off the electrical, as it does the common fire from bodies, I expected the plate would, by losing some of its natural quantity, become negatively electrised. But I could not perceive, by any motion in the cotton, that it was at all affected: nor by any separation of small cork balls suspended from the plate. could it be observed that the plate was in any manner electrified.

Mr. Canton here has also found, that two tea cups, set on electric stands, and filled one with boiling, the other with cold water, and

equally electrified, continued equally so, notwithstanding the plentiful evaporation from the hot water. Your experiment and his agreeing, shows another remarkable difference between electric and common fire. For the latter quits most readily the body that contains it, where water, or any other fluid, is evaporating from the surface of that body, and escapes with the vapour. Hence the method, long in use in the east, of cooling liquors, by wrapping the bottles round with a wet cloth, and exposing them to the wind. Dr. Cullen, of Edinburgh, has given some experiments of cooling by evaporation; and I was present at one made by Dr. Hadley, then professor of chemistry at Cambridge, when, by repeatedly wetting the ball of a thermometer with spirit, and quickening the evaporation by the blast of a bellows, the mercury fell from 65, the state of warmth in the common air to 7, which is 22 degrees below freezing; and, accordingly, from some water mixed with the spirit, or from the breath of the assistants, or both, ice gathered in small spicula round the ball, to the thickness of near a quarter of an inch. To such a degree did the mercury lose the fire it before contained, which, as I imagine, took the opportunity of escaping, in company with the evaporating particles of the spirit, by adhering to those particles.

Your experiments of the Florence flask, and boiling water, is very curious. I have repeated it, and found it to succeed as you describe it, in two flasks out of three. The third would not charge when filled with either hot or cold water. I repeated it, because I remembered I had once attempted to make an electric bottle of a Florence flask, filled with cold water, but could not charge it at all; which I then imputed to some imperceptible cracks in the small, extremely thin bubbles, of which that glass is full, and I concluded none of that kind would do. But you have shown me my mistake.—Mr. Wilson had formerly acquainted us, that red hot glass would conduct electricity; but that so small a degree of heat, as that communicated by boiling water, would so open the pores of extremely thin glass, as to suffer the electric fluid freely to pass, was not before known. Some experiments similar to yours, have, however, been made here, before the receipt of your letter, of which I shall now give you an account.

I formerly had an opinion that a Leyden bottle, charged and then sealed hermetically, might retain its electricity for ever; but having afterwards some suspicion that possibly that subtle fluid might, by slow imperceptible degrees, soak through the glass, and in time escape, I requested some of my friends, who had conveniences for doing it, to make trial, whether after some months, the charge of a bottle so sealed would be sensibly diminished. Being at Birmingham, in September, 1760, Mr. Bolton of that place opened a bottle that had been charged, and its long tube neck hermetically sealed in January preceding. On breaking off the end of the neck, and introducing a wire into it, we found it possessed of a considerable quantity of electricity, which was discharged by a snap and spark. This bottle had lain near seven months on a shelf, in a closet, in contact with bodies that would undoubtedly have carried off all its electricity, if it could have come readily through the glass. Yet as the quantity manifested by the discharge was not apparently so great as might have been expected from a bottle of that size well charged, some doubt remained whether part had escaped while the neck was sealing, or had since, by degrees, soaked through the glass. But an experiment of Mr. Canton's, in which such a bottle was kept under water a week, without having its electricity in the least impaired, seems to show, that when the glass is cold, though extremely thin, the electric fluid is well retained by it. As that ingenious and accurate experimenter made a discovery, like yours, of the effect of heat in rendering thin glass permeable by that fluid, it is but doing him justice to give you his account of it, in his own words, extracted from his letter to me, in which he communicated it, dated October 31, 1760, *viz.*

"Having procured some thin glass balls, of about an inch and a half in diameter, with stems, or tubes, of eight or nine inches in length, I electrified them, some positively on the inside, and others negatively, after the manner of charging the Leyden bottle, and sealed them hermetically. Soon after I applied the naked balls to my electrometer, and could not discover the least sign of their being electrical, but holding them before the fire, at the distance of six or eight inches, they became strongly electrical in a very short time, and more so when they were cooling. These balls will, every time they are heated, give the electrical fluid to, or take it from other bodies, according to the *plus* or *minus* state of it within them. Heating them frequently, I find will sensibly diminish their power; but keeping one of them under water a week did not appear in the least degree to impair it. That which I kept under water, was charged on the 22d of September last, was several times heated before it was kept in water, and has been heated frequently since, and yet it still retains its virtue to a very considerable degree. The breaking two of my balls accidentally gave me an opportunity of measuring their thickness, which I found to be between seven and eight parts in a thousand of an inch.

"A down feather, in a thin glass ball, hermetically sealed, will not be affected by the application of an excited tube, or the wire of a charged phial, unless the ball be consider-

ably heated; and if a glass pane be heated till it begins to grow soft, and in that state be held between the wire of a charged phial, and the discharging wire, the course of the electrical fluid will not be through the glass, but on the surface, round by the edge of it."

By this last experiment of Mr. Canton's, it appears, that though by a moderate heat, thin glass becomes, in some degree, a conductor of electricity, yet, when of the thickness of a common pane, it is not, though in a state near melting, so good a conductor as to pass the shock of a discharged bottle. There are other conductors which suffer the electric fluid to pass through them gradually, and yet will not conduct a shock. For instance, a quire of paper will conduct through its whole length, so as to electrify a person, who, standing on wax, presents the paper to an electrified prime conductor; but it will not conduct a shock even through its thickness only; hence the shock either fails, or passes by rendering a hole in the paper. Thus a sieve will pass water gradually, but a stream from a fire engine would either be stopped by it, or tear a hole through it.

It should seem, that to make glass permeable to the electric fluid, the heat should be proportioned to the thickness. You found the heat of boiling water, which is but 210, sufficient to render the extreme thin glass in a Florence flask permeable even to a shock.—Lord Charles Cavendish, by a very ingenious experiment, has found the heat of 400 requisite to render thicker glass permeable to the common current.

"A glass tube, (See the *Plate*) of which the part C B was solid, had wire thrust in each end, reaching to B and C.

"A small wire was tied on at D, reaching to the floor, in order to carry off any electricity that might run along upon the tube.

"The bent part was placed in an iron pot; filled with iron filings; a thermometer was also put into the filings: a lamp was placed under the pot; and the whole was supported upon glass.

"The wire A being electrified by a machine, before the heat was applied, the corks at E separated, at first upon the principle of the Leyden phial.

"But after the part C B of the tube was heated to 600, the corks continued to separate, though you discharged the electricity by touching the wire at E, the electrical machine continuing in motion.

"Upon letting the whole cool, the effect remained till the thermometer was sunk to 400."

It were to be wished, that this noble philosopher would communicate more of his experiments to the world, as he makes many, and with great accuracy.

You know I have always looked upon and mentioned the equal repulsion in cases of positive and of negative electricity, as a phenomenon difficult to be explained. I have sometimes, too, been inclined, with you, to resolve all into attraction; but besides that attraction seems in itself as unintelligible as repulsion, there are some appearances of repulsion that I cannot so easily explain by attraction; this for one instance. When the pair of cork balls are suspended by flaxen threads, from the end of the prime conductor, if you bring a rubbed glass tube near the conductor, but without touching it, you see the balls separate, as being electrified positively; and yet you have communicated no electricity to the conductor, for, if you had, it would have remained there, after withdrawing the tube; but the closing of the balls immediately thereupon, shows that the conductor has no more left in it than its natural quantity. Then again approaching the conductor with the rubbed tube, if, while the balls are separated, you touch with a finger that end of the conductor to which they hang, they will come together again, as being, with that part of the conductor, brought to the same state with your finger, *i. e.* the natural state. But the other end of the conductor, near which the tube is held, is not in that state, but in the negative state, as appears on removing the tube; for then part of the natural quantity left at the end near the balls, leaving that end to supply what is wanting at the other, the whole conductor is found to be equally in the negative state. Does not this indicate that the electricity of the rubbed tube had repelled the electric fluid, which was diffused in the conductor while in its natural state, and forced it to quit the end to which the balls were suspended? I own I find it difficult to account for its quitting that end on the approach of the rubbed tube, but on the supposition of repulsion; for, while the conductor was in the same state with the air, *i. e.* the natural state, it does not seem to me easy to suppose, that an attraction should suddenly take place between the air and the natural quantity of the electric fluid in the conductor, so as to draw it to, and accumulate it on the end opposite to that approached by the tube; since bodies, possessing only their natural quantity of that fluid, are not usually seen to attract each other, or to affect mutually the quantities of electricity each contains.

There are likewise appearances of repulsion in other parts of nature. Not to mention the violent force with which the particles of water, heated to a certain degree, separate from each other, or those of gunpowder, when touched with the smallest spark of fire, there is the seeming repulsion between the same poles of the magnet, a body containing a subtle moveable fluid in many respects analogous to the electric fluid. If two magnets are so suspended by strings, as that their poles of

the same denomination are opposite to each other, they will separate, and continue so; or if you lay a magnetic steel bar on a smooth table, and approach it with another parallel to it, the poles of both in the same position, the first will recede from the second so as to avoid the contact, and may thus be pushed (or at least appear to be pushed) off the table. Can this be ascribed to the attraction of any surrounding body or matter drawing them asunder, or drawing the one away from the other? If not, and repulsion exists in nature, and in magnetism, why may it not exist in electricity? We should not, indeed, multiply causes in philosophy without necessity; and the greater simplicity of your hypothesis would recommend it to me, if I could see that all appearances would be solved by it. But I find, or think I find, the two causes more convenient than one of them alone.—Thus I might solve the circular motion of your horizontal stick, supported on a pivot, with two pins at their ends, pointing contrary ways, and moving in the same direction when electrified, whether positively or negatively: when positively, the air opposite to the points being electrised positively, repels the points; when negatively, the air opposite to the points being also, by their means, electrised negatively, attraction takes place between the electricity in the air behind the heads of the pins, and the negative pins, and so they are, in this case, drawn in the same direction that in the other they were driven. —You see I am willing to meet you halfway, a complaisance I have not met with in our brother Nollet, or any other hypothesis-maker, and therefore may value myself a little upon it, especially as they say I have some ability in defending even the wrong side of a question, when I think fit to take it in hand.

What you give as an established law of the electric fluid, "That quantities of different densities mutually attract each other, in order to restore the equilibrium," is, I think, not well founded, or else not well expressed. Two large cork balls, suspended by silk strings, and both well and equally electrified, separate to a great distance. By bringing into contact with one of them another ball of the same size, suspended likewise by silk, you will take from it half its electricity. It will then, indeed, hang at a less distance from the other, but the full and the half quantities will not appear to attract each other, that is, the balls will not come together. Indeed, I do not know any proof we have, that one quantity of electric fluid is attracted by another quantity of that fluid, whatever difference there may be in their densities. And, supposing in nature, a mutual attraction between two parcels of any kind of matter, it would be strange if this attraction should subsist strongly while those parcels were unequal, and cease when more matter of the same kind was added to the smallest parcel, so as to make it equal to the biggest. By all the laws of attraction in matter, that we are acquainted with, the attraction is stronger in proportion to the increase of the masses, and never in proportion to the difference of the masses. I should rather think the law would be, "That the electric fluid is attracted strongly by all other matter that we know of, while the parts of that fluid mutually repel each other." Hence its being equally diffused (except in particular circumstances) throughout all other matter. But this you jokingly call "electrical orthodoxy." It is so with some at present, but not with all; and, perhaps, it may not always be orthodoxy with any body. Opinions are continually varying, where we cannot have mathematical evidence of the nature of things: and they must vary. Nor is that variation without its use, since it occasions a more thorough discussion, whereby error is often dissipated, true knowledge is increased, and its principles become better understood and more firmly established.

Air should have, as you observe, "its share of the common stock of electricity, as well as glass, and, perhaps, all other electrics *per se*." But I suppose, that, like them, it does not easily part with what it has, or receive more, unless when mixed with some non-electric, as moisture for instance, of which there is some in our driest air. This, however, is only a supposition; and your experiment of restoring electricity to a negatively electrised person, by extending his arm upwards into the air with a needle between his fingers, on the point of which light may be seen in the night, is, indeed, a curious one. In this town the air is generally moister than with us, and here I have seen Mr. Canton electrify the air in one room positively, and in another, which communicated by a door, he has electrised the air negatively. The difference was easily discovered by his cork balls, as he passed out of one room into another.—Père Beccaria, too, has a pretty experiment, which shows that air may be electrised. Suspending a pair of small light balls, by flaxen threads, to the end of his prime conductor, he turns his globe some time, electrising positively, the balls diverging and continuing separate all the time. Then he presents the point of a needle to his conductor, which gradually drawing off the electric fluid, the balls approach each other and touch, before all is drawn from the conductor; opening again as more is drawn off, and separating nearly as wide as at first, when the conductor is reduced to the natural state. By this it appears, that when the balls came together, the air surrounding the balls was just as much electrised as the conductor at that time; and more than the conductor, when that was reduced to its

natural state. For the balls, though in the natural state, will diverge, when the air that surrounds them is electrised *plus* or *minus*, as well as when that is in its natural state and they are electrised *plus* or *minus* themselves. I foresee that you will apply this experiment to the support of your hypothesis, and I think you may make a good deal of it.

It was a curious inquiry of yours, Whether the electricity of the air, in clear dry weather, be of the same density at the height of two or three hundred yards, as near the surface of the earth?—and I am glad you made the experiment. Upon reflection, it should seem probable, that whether the general state of atmosphere at any time be positive or negative, that part of it which is next the earth will be nearer the natural state, by having given to the earth in one case, or having received from it in the other. In electrising the air of a room, that which is nearest the walls, or floor, is least altered. There is only one small ambiguity in the experiment, which may be cleared by more trials; it arises from the supposition that bodies may be electrised positively by the friction of air blowing strongly on them, as it does on the kite and its string. If at some times the electricity appears to be negative, as that friction is the same, the effect must be as from a negative state of the upper air.

I am much pleased with your electrical thermometer, and the experiments you have made with it. I formerly satisfied myself by an experiment with my phial and syphon, that the elasticity of the air was not increased by the mere existence of an electric atmosphere within the phial; but I did not know, till you now inform me, that heat may be given to it by an electric explosion. The continuance of its rarefaction, for some time after the discharge of your glass jar and of your case of bottles, seem to make this clear. The other experiments on wet paper, wet thread, green grass, and green wood, are not so satisfactory; as possibly the reducing part of the moisture to vapour, by the electric fluid passing through it, might occasion some expansion which would be gradually reduced by the condensation of such vapour. The fine silver thread, the very small brass wire, and the strip of gilt paper, are also subject to a similar objection, as even metals, in such circumstances, are often partly reduced to smoke, particularly the gilding on paper.

But your subsequent beautiful experiment on the wire, which you made hot by the electric explosion, and in that state fired gunpowder with it, puts it out of all question, that heat if produced by our artificial electricity, and that the melting of metals in that way, is not by what I formerly called a cold fusion. A late instance here, of the melting a bell-wire, in a house struck by lightning, and parts of the wire burning holes in the floor on which they fell, has proved the same with regard to the electricity of nature. I was too easily led into that error by accounts given, even in philosophical books, and from remote ages downwards, of melting money in purses, swords in scabbards, &c. without burning the inflammable matters that were so near those melted metals. But men are, in general, such careless observers, that a philosopher cannot be too much on his guard in crediting their relations of things extraordinary, and should never build an hypothesis on any thing but clear facts and experiments, or it will be in danger of soon falling, as this does, like a house of cards.

How many ways there are of kindling fire, or producing heat in bodies! By the sun's rays, by collision, by friction, by hammering, by putrefaction, by fermentation, by mixtures of fluids, by mixtures of solids with fluids, and by electricity. And yet the fire when produced, though in different bodies it may differ in circumstances, as in colour, vehemence, &c. yet in the same bodies it is generally the same. Does not this seem to indicate that the fire existed in the body, though in a quiescent state, before it was by any of these means excited, disengaged, and brought forth to action and to view? May it not constitute a part, and even a principle part, of the solid substance of bodies? If this should be the case, kindling fire in a body would be nothing more than developing this inflammable principle, and setting it at liberty to act in separating the parts of that body, which then exhibits the appearances of scorching, melting, burning, &c. When a man lights a hundred candles from the flame of one, without diminishing that flame, can it be properly said to have *communicated* all that fire? When a single spark from a flint, applied to a magazine of gunpowder, is immediately attended with this consequence, that the whole is in flame, exploding with immense violence, could all this fire exist first in the spark? We cannot conceive it. And thus we seem led to this supposition, that there is fire enough in all bodies to singe, melt, or burn them, whenever it is, by any means, set at liberty, so that it may exert itself upon them, or be disengaged from them. This liberty seems to be afforded it by the passage of electricity through them, which we know can and does, of itself, separate the parts even of water; and perhaps the immediate appearances of fire are only the effects of such separations? If so, there would be no need of supposing that the electric fluid *heats itself* by the swiftness of its motion, or heats bodies by the resistance it meets with in passing through them. They would only be heated in proportion as such separation could be more easily made. Thus a melting heat cannot be given to a large wire in the flame

of a candle, though it may to a small one; and this not because the large wire resists *less* that action of the flame which tends to separate its parts, but because it resists it *more* than the smaller wire; or because the force being divided among more parts acts weaker on each.

This reminds me, however, of a little experiment I have frequently made, that shows, at one operation, the different effects of the same quantity of electric fluid passing through different quantities of metal. A strip of tinfoil, three inches long, a quarter of an inch wide at one end, and tapering all the way to a sharp point at the other, fixed between two pieces of glass, and having the electricity of a large glass jar sent through it, will not be discomposed in the broadest part; towards the middle will appear melted in spots; where narrower, it will be quite melted; and about half an inch of it next the point will be reduced to smoke.

You were not mistaken in supposing that your account of the effect of the pointed rod, in securing Mr. West's house from damage by a stroke of lightning, would give me great pleasure. I thank you for it most heartily, and for the pains you have taken in giving me so complete a description of its situation, form, and substance, with the draft of the melted point. There is one circumstance, *viz.* that the lightning was seen to diffuse itself from the foot of the rod over the wet pavement, which seems, I think, to indicate that the earth under the pavement was very dry, and that the rod should have been sunk deeper, till it came to earth moister, and therefore apter to receive and dissipate the electric fluid. And although, in this instance, a conductor formed of nail rods, not much above a quarter of an inch thick, served well to convey the lightning, yet some accounts I have seen from Carolina, give reason to think that larger may be sometimes necessary, at least for the security of the conductor itself, which when too small, may be destroyed in executing its office, though it does, at the same time, preserve the house. Indeed, in the construction of an instrument so new, and of which we could have so little experience, it is rather lucky that we should at first be so near the truth as we seem to be, and commit so few errors.

There is another reason for sinking deeper the lower end of the rod, and also for turning it outwards under ground to some distance from the foundation; it is this, that water dripping from the eaves falls near the foundation, and sometimes soaks down there in greater quantities, so as to come near the end of the rod, though the ground about it be drier. In such case, this water may be exploded, that is, blown into vapour, whereby a force is generated, that may damage the foundation. Water reduced to vapour, is said to occupy 14,000 times its former space. I have sent a charge through a small glass tube, that has borne it well while empty, but when filled first with water, was shattered to pieces and driven all about the room:—finding no part of the water on the table, I suspected it to have been reduced to vapour; and was confirmed in that suspicion afterwards, when I had filled a like piece of tube with ink, and laid it on a sheet of clean paper, whereon, after the explosion, I could find neither any moisture nor any sully from the ink. This experiment of the explosion of water, which I believe was first made by that most ingenious electrician, father Beccaria, may account for what we sometimes see in a tree struck by lightning, when part of it is reduced to fine splinters like a broom; the sap vessels being so many tubes containing a watery fluid, which, when reduced to vapour, rends every tube lengthways. And perhaps it is this rarefaction of the fluids in animal bodies killed by lightning or electricity, that, by separating its fibres, renders the flesh so tender, and apt so much sooner to putrefy. I think too, that much of the damage done by lightning to stone and brick walls may sometimes be owing to the explosion of water, found, during showers, running or lodging in the joints of small cavities or cracks that happen to be in the walls.

Here are some electricians that recommend knobs instead of points on the upper end of the rods, from a supposition that the points invite the stroke. It is true that points draw electricity at greater distances in the gradual silent way; but knobs will draw at the greatest distance a stroke. There is an experiment that will settle this. Take a crooked wire of the thickness of a quill, and of such a length as that one end of it being applied to the lower part of a charged bottle, the upper may be brought near the ball on the top of the wire that is in the bottle. Let one end of this wire be furnished with a knob, and the other may be gradually tapered to a fine point. When the point is presented to discharge the bottle, it must be brought much nearer before it will receive the stroke, than the knob requires to be. Points besides tend to repel the fragments of an electrised cloud, knobs draw them nearer. An experiment, which I believe I have shown you, of cotton fleece hanging from an electrised body, shows this clearly when a point or a knob is presented under it.

You seem to think highly of the importance of this discovery, as do many others on our side of the water. Here it is very little regarded; so little, that though it is now seven or eight years since it was made public, I have not heard of a single house as yet attempted to be secured by it. It is true the

mischiefs done by lightning are not so frequent here as with us, and those who calculate chances may perhaps find that not one death (or the destruction of one house) in a hundred thousand happens from that cause, and that therefore it is scarce worth while to be at any expense to guard against it.—But in all countries there are particular situations of buildings more exposed than others to such accidents, and there are minds so strongly impressed with the apprehension of them, as to be very unhappy every time a little thunder is within their hearing; it may therefore be well to render this little piece of new knowledge as general and as well understood as possible, since to make us *safe* is not all its advantage, it is some to make us *easy*. And as the stroke it secures us from might have chanced perhaps but once in our lives, while it may relieve us a hundred times from those painful apprehensions, the latter may possibly on the whole contribute more to the happiness of mankind than the former.

Your kind wishes and congratulations are very obliging. I return them cordially;—being, with great regard and esteem,

B. FRANKLIN."

Effects of Lightning in Carolina,

Referred to in the preceding Letter—of the effects of Lightning on two of the rods commonly affixed to houses there, for securing them against Lightning.

"CHARLESTON, Nov 1, 1760.

"——— IT is some years since Mr. Raven's rod was struck by lightning. I hear an account of it was published at the time, but I cannot find it. According to the best information I can now get, he had fixed to the outside of his chimney a large iron rod, several feet in length, reaching above the chimney; and to the top of this rod the points were fixed. From the lower end of this rod, a small brass wire was continued down to the top of another iron rod driven into the earth. On the ground-floor in the chimney stood a gun, leaning against the back wall, nearly opposite to where the brass wire came down on the outside. The lightning fell upon the points, did no damage to the rod they were fixed to; but the brass wire, all down till it came opposite to the top of the gun-barrel, was destroyed.* There the lightning made a hole through the wall or back of the chimney, to get to the gun-barrel,† down which it seems to have passed, as, although it did not hurt the barrel, it damaged the butt of the stock, and blew up some bricks of the hearth. The brass wire below the hole in the wall remained good. No other damage, as I can learn, was done to the house. I am told the same house had formerly been struck by lightning, and much damaged, before these rods were invented."

* A proof that it was not of sufficient substance to conduct with safety to itself (though with safety *so far* to the wall) so large a quantity of the electric fluid.

† A more substantial conductor

Mr. William Maine's Account of the Effects of the Lightning on his Rod, dated at Indian Land, in South Carolina, August 28, 1760.

"I HAD a set of electrical points, consisting of three prongs, of large brass wire tipt with silver, and perfectly sharp, each about seven inches long; these were rivetted at equal distances into an iron nut about three quarters of an inch square, and opened at top equally to the distance of six or seven inches from point to point, in a regular triangle. This nut was screwed very tight on the top of an iron rod of above half an inch diameter, or the thickness of a common curtain-rod, composed of several joints, annexed by hooks turned at the ends of each joint, and the whole fixed to the chimney of my house by iron staples. The points were elevated (*a*) six or seven inches above the top of the chimney; and the lower joint sunk three feet in the earth, in a perpendicular direction.

Thus stood the points on Tuesday last about five in the evening, when the lightning broke with a violent explosion on the chimney, cut the rod square off just under the nut, and I am persuaded, melted the points, nut, and top of the rod, entirely up; as after the most diligent search, nothing of either was found (*b*,) and the top of the remaining rod was cased over with a congealed solder. The lightning ran down the rod, starting almost all the staples (*c*,) and unhooking the joints without affecting the rod (*d*,) except on the inside of each hook where the joints were coupled, the surface of which was melted (*e*,) and left as cased over with solder.—No part of the chimney was damaged (*f*,) only at the foundation (*g*,) where it was shattered almost quite round, and several bricks were torn out (*h*.) Considerable cavities were made in the earth quite round the foundation, but most within eight or nine inches of the rod. It also shattered the bottom weather-board (*i*,) at one corner of the house, and made a large hole in the earth by the corner post. On the other side of the chimney, it ploughed up several furrows in the earth, some yards in length. It ran down the inside of the chimney (*k*,) carrying only soot with it; and filled the whole house with its flash, (*l*,) smoke, and dust. It tore up the hearth in several places (*m*,) and broke some pieces of china in the bœufet (*n*.) A copper tea-kettle standing in the chimney was beat together, as if some great weight had fallen upon it (*o*;) and three holes, each about half an inch diameter, melted through the bottom

(*p*.) What seems to me the most surprising is, that the hearth under the kettle was not hurt, yet the bottom of the kettle was drove inward, as if the lightning proceeded from under it upwards (*q*,) and the cover was thrown to the middle of the floor (*r*.) The fire dogs, an iron loggerhead, an Indian pot, an earthen cup, and a cat, were all in the chimney at the time unhurt, though a great part of the hearth was torn up (*s*.) My wife's sister, two children, and a negro wench, were all who happened to be in the house at the time: the first, and one child sat within five feet of the chimney; and were so stunned, that they never saw the lightning nor heard the explosion; the wench, with the other child in her arms, sitting at a greater distance, was sensible of both; though every one was so stunned that they did not recover for some time; however it pleased God that no farther mischief ensued. The kitchen, at 90 feet distance, was full of negroes, who were all sensible of the shock; and some of them tell me, that they felt the rod about a minute after, when it was so hot that they could not bear it in hand.

Remarks by Dr. Franklin.

THE foregoing very sensible and distinct account may afford a good deal of instruction relating to the nature and effects of lightning, and to the construction and use of this instrument for averting the mischiefs of it. Like other new instruments, this appears to have been at first in some respects imperfect; and we find that we are, in this as in others, to expect improvement from experience chiefly: but there seems to be nothing in the account, that should discourage us in the use of it; since at the same time that its imperfections are discovered, the means of removing them are pretty easily to be learnt from the circumstances of the account itself; and its utility upon the whole is manifest.

One intention of the pointed rod, is, to *prevent* a stroke of lightning. (*See pages* 289, 296.) But to have a better chance of obtaining this end, the points should not be too near to the top of the chimney or highest parts of the building to which they are affixed, but should be extended five or six feet above it; otherwise their operation in silently drawing off the fire (from such fragments of cloud as float in the air between the great body of cloud and the earth) will be prevented. For the experiment with the lock of cotton hanging below the electrified prime conductor shows, that a finger under it, being a blunt body, extends the cotton, drawing its lower part downwards; when a needle, with its point presented to the cotton, makes it fly up again to the prime conductor; and that this effect is strongest when as much of the needle as possible appears above the end of the finger; grows weaker as the needle is shortened between the finger and thumb; and is reduced to nothing when only a short part below the point appears above the finger. Now it seems the points of Mr. Maine's rod were elevated only (*a*) *six or seven inches above the top of the chimney;* which, considering the bulk of the chimney and the house, was too small an elevation. For the great body of the matter near them would hinder their being easily brought into a negative state by the repulsive power of the electrised cloud, in which negative state it is that they attract most strongly and copiously the electric fluid from other bodies, and convey it into the earth.

(*b*) *Nothing of the points, &c. could be found.* This is a common effect. (*See page* 297.) Where the quantity of the electric fluid passing is too great for the conductor through which it passes, the metal is either melted, or reduced to smoke and dissipated; but where the conductor is sufficiently large, the fluid passes in it without hurting it. Thus these three wires were destroyed, while the rod to which they were fixed, being of greater substance, remained unhurt; its end only, to which they were joined, being a little melted, some of the melted part of the lower ends of those wires uniting with it, and appearing on it like solder.

(*c*) (*d*) (*e*) As the several parts of the rod were connected only by the ends being bent round into hooks, the contact between hook and hook was much smaller than the rod; therefore the current through the metal being confined in those narrow passages, melted part of the metal, as appeared on examining the inside of each hook. Where metal is melted by lightning, some part of it is generally exploded; and these explosions in the joints appear to have been the cause of unhooking them; and, by that violent action, of starting also most of the staples. We learn from hence, that a rod in one continued piece is preferable to one composed of links or parts hooked together.

(*f*) *No part of the chimney was damaged;* because the lightning passed in the rod. And this instance agrees with others in showing, that the second and principal intention of the rods is obtainable, viz. that of *conducting* the lightning. In all the instances yet known of the lightning's falling on any house guarded by rods, it has pitched down upon the point of the rod, and has not fallen upon any other part of the house. Had the lightning fallen on this chimney, unfurnished with a rod, it would probably have rent it from top to bottom, as we see, by the effects of the lightning on the points and rod, that its quantity was very great; and we know that many chimneys have been so demolished. But *no part of this was damaged, only* (*f*) (*g*) (*h*) *at the foundation, where it was shattered and se-*

veral bricks torn out. Here we learn the principal defect in fixing this rod. The lower joint being sunk but three feet into the earth, did not it seems go low enough to come at water, or a large body of earth so moist as to receive readily from its end the quantity it conducted. The electric fluid, therefore, thus accumulated near the lower end of the rod, quitted it at the surface of the earth, dividing in search of other passages. Part of it tore up the surface in furrows, and made holes in it: part entered the bricks of the foundation, which being near the earth are generally moist, and, in exploding that moisture, shattered them. (*See page* 311.) Part went through or under the foundation, and got under the hearth, blowing up great part of the bricks (*m*) (*s*), and producing the other effects (*o*) (*p*) (*q*) (*r*). The iron dogs, loggerhead, and iron pot were not hurt, being of sufficient substance, and they probably protected the cat. The copper tea-kettle being thin suffered some damage. Perhaps, though found on a sound part of the hearth, it might at the time of the stroke have stood on the part blown up, which will account both for the bruising and melting.

That *it ran down the inside of the chimney* (*k*) I apprehend must be a mistake. Had it done so, I imagine it would have brought something more than soot with it; it would probably have ripped off the pargetting, and brought down fragments of plaster and bricks. The shake, from the explosion on the rod, was sufficient to shake down a good deal of loose soot. Lightning does not usually enter houses by the doors, windows, or chimneys, as open passages, in the manner that air enters them: its nature is, to be attracted by substances, that are conductors of electricity; it penetrates and passes *in* them, and, if they are not good conductors as are neither wood, brick, stone nor plaster, it is apt to rend them in its passage. It would not easily pass through the air from a cloud to a building were it not for the aid afforded it in its passage by intervening fragments of clouds below the main body, or by the falling rain.

It is said that *the house was filled with its flash* (*l*). Expressions like this are common in accounts of the effects of lightning, from which we are apt to understand that the lightning filled the house. Our language indeed seems to want a word to express the *light* of lightning as distinct from the lightning itself. When a tree on a hill is struck by it, the lightning of that stroke exists only in a narrow vein between the cloud and tree, but its light fills a vast space many miles round; and people at the greatest distance from it are apt to say, "The lightning came into our rooms through our windows." As it is in itself extremely bright, it cannot, when so near as to strike a house, fail illuminating highly every room in it through the windows; and this I suppose to have been the case at Mr. Maine's; and that, except in and near the hearth, from the causes above-mentioned, it was not in any other part of the house; *the flash* meaning no more than *the light* of the lightning. It is for want of considering this difference, that people suppose there is a kind of lightning not attended with thunder. In fact there is probably a loud explosion accompanying every flash of lightning, and at the same instant;—but as sound travels slower than light, we often hear the sound some seconds of time after having seen the light; and as sound does not travel so far as light, we sometimes see the light at a distance too great to hear the sound.

(*n*) The *breaking some pieces of china in the bœufet*, may nevertheless seem to indicate that the lightning was there: but as there is no mention of its having hurt any part of the bœufet, or of the walls of the house, I should rather ascribe that effect to the concussion of the air, or shake of the house by the explosion.

Thus, to me it appears, that the house and its inhabitants were saved by the rod, though the rod itself was unjointed by the stroke; and that, if it had been made of one piece, and sunk deeper in the earth, or had entered the earth at a greater distance from the foundation, the mentioned small damages (except the melting of the points) would not have happened.

Dr. Heberden, London.

On the Electricity of the Tourmalin.

CRAVEN-STREET, June 7, 1759.

I NOW return the smallest of your tourmalins, with hearty thanks for the kind present of the other, which though I value highly for its rare and wonderful properties, I shall ever esteem it more for the friendship I am honoured with by the giver.

I hear that the negative electricity of one side of the tourmalin, when heated, is absolutely denied (and all that has been related of it ascribed to prejudice in favour of a system) by some ingenious gentlemen abroad, who profess to have made the experiments on the stone with care and exactness. The experiments have succeeded differently with me; yet I would not call the accuracy of these gentlemen in question. Possibly the tourmalins they have tried were not properly cut; so that the positive and negative powers were obliquely placed, or in some manner whereby their effects were confused, or the negative parts more easily supplied by the positive.—Perhaps the lapidaries who have hitherto cut these stones, had no regard to the situation of the two powers, but chose to make the faces of the stone where they could obtain the great-

est breadth, or some other advantage in the form. If any of these stones, in their natural state, can be procured here, I think it would be right to endeavour finding, before they are cut, the two sides that contain the opposite powers, and make the faces there. Possibly in that case, the effects might be stronger, and more distinct; for though both these stones that I have examined have evidently the two properties, yet, without the full heat given by boiling water, they are somewhat confused; the virtue seems strongest towards one end of the face; and in the middle, or near the other end, scarce discernible; and the negative, I think, always weaker than the positive.

I have had the large one new cut, so as to make both sides alike, and find the change of form has made no change of power, but the properties of each side remain the same as I found them before.—It is now set in a ring in such a manner as to turn on an axis, that I may conveniently, in making experiments, come at both sides of the stone. The little rim of gold it is set in, has made no alteration in its effects. The warmth of my finger, when I wear it, is sufficient to give it some degree of electricity, so that it is always ready to attract light bodies.

The following experiments have satisfied me that M. Æpinus's account of the positive and negative states of the opposite sides of the heated tourmalin is well founded.

I heated the large stone in boiling water.

As soon as it was dry, I brought it near a very small cork ball, that was suspended by a silk thread.

The ball was attracted by one face of the stone, which I call A, and then repelled.

The ball in that state was also repelled by the positively charged wire of a phial, and attracted by the other side of the stone, B.

The stone being heated afresh, and the side B brought near the ball, it was first attracted and presently after repelled by that side.

In this second state it was repelled by the negatively charged wire of a phial.

Therefore, if the principles now generally received, relating to positive and negative electricity, are true, the side A of the large stone, when the stone is heated in water, is in a positive state of electricity; and the side B, in a negative state.

The same experiments being made with the small stone stuck by one edge on the end of a small glass tube, with sealing-wax, the same effects are produced. The flat side of the small stone gives the signs of positive electricity; the high side gives the signs of negative electricity.

Again: I suspended the small stone by a silk thread.

I heated it as it hung, in boiling water.

I heated the large one in boiling water.

Then I brought the large stone near to the suspended small one,

Which immediately turned its flat side to the side B of the large stone, and would cling to it.

I turned the ring, so as to present the side A of the large stone, to the flat side of the small one.

The flat side was repelled, and the small stone, turning quick, applied its high side to the side A of the large one.

This was precisely what ought to happen, on the supposition that the flat side of the small stone, when heated in water, is positive, and the high side negative; the side A of the large stone positive, and the side B negative.

The effect was apparently the same as would have been produced, if one magnet had been suspended by a thread, and the different poles of another brought alternately near it.

I find that the face A, of the large stone, being coated with leaf-gold (attached by the white of an egg, which will bear dipping in hot water) becomes quicker and stronger in its effect on the cork ball, repelling it the instant it comes in contact; which I suppose to be occasioned by the united force of the different parts of the face, collected and acting together through the metal.

B. FRANKLIN.

Professor Winthrop to B. Franklin.

New Observation relating to Electricity in the Atmosphere. Cambridge, (Massachusetts,) Sept. 29, 1762.

THERE is an observation relating to electricity in the atmosphere, which seemed new to me, though perhaps it will not to you: however, I will venture to mention it. I have some points on the top of my house, and the wire where it passes within-side the house is furnished with bells, according to your method, to give notice of the passage of the electric fluid. In summer, these bells, generally ring at the approach of a thunder-cloud; but cease soon after it begins to rain. In winter, they sometimes, though not very often, ring while it is snowing; but never, that I remember, when it rains. But what was unexpected to me was, that, though the bells had not rung while it was snowing, yet, the next day, after it had done snowing, and the weather was cleared up, while the snow was driven about by a high wind at W. or N. W. the bells rung for several hours (though with little intermissions) as briskly as ever I knew them, and I drew considerable sparks from the wire. The phenomenon I never observed but twice, viz. on the 31st of January, 1760, and the 3d of March, 1762.—I am, sir, &c.

A. Small, of London, to Dr. Franklin.

Flash of Lightning that struck St. Bride's Steeple.

I HAVE just recollected that in one of our great storms of lightning, I saw an appearance, which I never observed before, nor ever heard described. I am persuaded that I saw *the* flash which struck St. Bride's steeple. Sitting at my window, and looking to the north, I saw what appeared to me a solid strait rod of fire, moving at a very sharp angle with the horizon. It appeared to my eye as about two inches diameter, and had nothing of the zig-zag lightning motion. I instantly told a person sitting with me, that some place must be struck at that instant. I was so much surprised at the vivid distinct appearance of the fire, that I did not hear the clap of thunder, which stunned every one besides. Considering how low it moved, I could not have thought it had gone so far, having St. Martin's, the New Church, and St. Clement's steeples in its way. It struck the steeple a good way from the top, and the first impression it made in the side is in the same direction I saw it move in. It was succeeded by two flashes, almost united, moving in a pointed direction. There were two distinct houses struck in Essex-street. I should have thought the rod would have fallen in Covent-Garden, it was so low. Perhaps the appearance is frequent, though never before seen by your's,

ALEXANDER SMALL.

To Peter Franklin, Newport.

Best Method of securing a Powder Magazine from Lightning.

———You may acquaint the gentleman that desired you to inquire my opinion of the best method of securing a powder magazine from lightning, that I think they cannot do better than to erect a mast not far from it, which may reach fifteen or twenty feet above the top of it, with a thick iron rod in one piece fastened to it, pointed at the highest end, and reaching down through the earth till it comes to water. Iron is a cheap metal; but if it were dearer, as this is a public thing, the expense is insignificant; therefore I would have the rod at least an inch thick, to allow for its gradually wasting by rust; it will last as long as the mast, and may be renewed with it. The sharp point for five or six inches should be gilt.

But there is another circumstance of importance to the strength, goodness, and usefulness of the powder, which does not seem to have been enough attended to: I mean the keeping it perfectly dry. For want of a method of doing this, much is spoiled in damp magazines, and much so damaged as to become of little value.—If, instead of barrels it were kept in cases of bottles well corked: or in large tin canisters, with small covers shutting close by means of oiled paper between, or covering the joining on the canister; or if in barrels, then the barrels lined with thin sheet lead; no moisture in either of these methods could possibly enter the powder, since glass and metals are both impervious to water.

By the latter of these means you see tea is brought dry and crisp from China to Europe, and thence to America, though it comes all the way by sea in the damp hold of a ship And by this method, grain, meal, &c. if well dried before it is put up, may be kept for ages sound and good.

There is another thing very proper to line small barrels with; it is what they call tin-foil, or leaf-tin, being tin milled between rollers till it becomes as thin as paper, and more pliant, at the same time that its texture is extremely close. It may be applied to wood with common paste, made with boiling-water thickened with flour; and, so laid on, will lie very close and stick well: but I should prefer a hard sickly varnish for that purpose, made of linseed oil much boiled. The heads might be lined separately, the tin wrapping a little round their edges. The barrel, while the lining is laid on, should have the end hoops slack, so that the staves standing at a little distance from each other, may admit the head into its groove. The tin-foil should be plyed into the groove. Then, one head being put in, and that end hooped tight, the barrel would be fit to receive the powder, and when the other head is put in and the hoops drove up, the powder would be safe from moisture even if the barrel were kept under water. This tin-foil is but about eighteen pence sterling a pound, and is so extremely thin, that I imagine a pound of it would line three or four powder-barrels.—I am, &c.

B. FRANKLIN.

Of Lightning; and the Methods now used in America for securing Buildings and Persons from its mischievous Effects.

EXPERIMENTS made in electricity first gave philosophers a suspicion, that the matter of lightning was the same with the electric matter. Experiments afterwards made on lightning obtained from the clouds by pointed rods, received into bottles, and subjected to every trial, have since proved this suspicion to be perfectly well founded; and that whatever properties we find in electricity, are also the properties of lightning.

This matter of lightning, or of electricity, is an extreme subtle fluid, penetrating other bodies, and subsisting in them, equally diffused.

When by any operation of art or nature, there happens to be a greater proportion of this fluid in one body than in another, the body which has most will communicate to that which has least, till the proportion be-

comes equal; provided the distance between them be not too great; or, if it is too great, till there be proper conductors to convey it from one to the other.

If the communication be through the air without any conductor, a bright light is seen between the bodies, and a sound is heard. In our small experiments, we call this light and sound the electric spark and snap; but in the great operations of nature, the light is what we call *lightning*, and the sound (produced at the same time, though generally arriving later at our ears than the light does to our eyes) is, with its echoes, called *thunder*.

If the communication of this fluid is by a conductor, it may be without either light or sound, the subtle fluid passing in the substance of the conductor.

If the conductor be good and of sufficient bigness, the fluid passes through it without hurting it. If otherwise, it is damaged or destroyed.

All metals, and water, are good conductors.—Other bodies may become conductors by having some quantity of water in them, as wood, and other materials used in building, but not having much water in them, they are not good conductors, and therefore are often damaged in the operation.

Glass, wax, silk, wool, hair, feathers, and even wood, perfectly dry, are non-conductors: that is, they resist instead of facilitating the passage of this subtle fluid.

When this fluid has an opportunity of passing through two conductors, one good and sufficient, as of metal, the other not so good, it passes in the best, and will follow it in any direction.

The distance at which a body charged with this fluid will discharge itself suddenly, striking through the air into another body that is not charged, or not so highly charged, is different according to the quantity of the fluid, the dimensions and form of the bodies themselves, and the state of the air between them.—This distance, whatever it happens to be, between any two bodies, is called their *striking distance*, as, till they come within that distance of each other, no stroke will be made.

The clouds have often more of this fluid in proportion than the earth; in which case, as soon as they come near enough (that is, within the striking distance) or meet with a conductor, the fluid quits them and strikes into the earth. A cloud fully charged with this fluid, if so high as to be beyond the striking distance from the earth, passes quietly without making noise or giving light; unless it meets with other clouds that have less.

Tall trees and lofty buildings, as the towers and spires of churches, become sometimes conductors between the clouds and the earth; but not being good ones, that is, not conveying the fluid freely, they are often damaged.

Buildings that have their roofs covered with lead, or other metal, the spouts of metal continued from the roof into the ground to carry off the water, are never hurt by lightning, as, whenever it falls on such a building, it passes in the metals and not in the walls.

When other buildings happen to be within the striking distance from such clouds, the fluid passes in the walls, whether of wood, brick, or stone, quitting the walls only when it can find better conductors near them, as metal rods, bolts, and hinges of windows or doors, gilding on wainscot or frames of pictures, the silvering on the backs of looking glasses, the wires for bells, and the bodies of animals, as containing watery fluids. And in passing through the house, it follows the direction of these conductors, taking as many in its way as can assist it in its passage, whether in a strait or crooked line, leaping from one to the other, if not far distant from each other, only rending the wall in the spaces where these partial good conductors are too distant from each other.

An iron rod being placed on the outside of a building, from the highest part continued down into the moist earth, in any direction strait or crooked, following the form of the roof or parts of the building, will receive the lightning at its upper end, attracting it so as to prevent its striking any other part; and affording it a good conveyance into the earth, will prevent its damaging any part of the building.

A small quantity of metal is found able to conduct a great quantity of this fluid. A wire no bigger than a goose-quill has been known to conduct (with safety to the building as far as the wire was continued) a quantity of lightning that did prodigious damage both above and below it; and probably larger rods are not necessary, though it is common in America, to make them of half an inch, some of three quarters, or an inch diameter.

The rod may be fastened to the wall, chimney, &c. with staples of iron.—The lightning will not leave the rod (a good conductor) to pass into the wall (a bad conductor) through those staples.—It would rather, if any were in the walls, pass out of it into the rod to get more readily by that conductor into the earth.

If the building be very large and extensive, two or more rods may be placed at different parts, for greater security.

Small ragged parts of clouds, suspended in the air between the great body of clouds and the earth (like leaf gold in electrical experiments) often serve as partial conductors for the lightning, which proceeds from one of them to another, and by their help comes within the striking distance to the earth or a building. It therefore strikes through those conductors a building that would otherwise be out of the striking distance.

Long sharp points communicating with the earth, and presented to such parts of clouds, drawing silently from them the fluid they are charged with, they are then attracted to the cloud, and may leave the distance so great as to be beyond the reach of striking.

It is therefore that we elevate the upper end of the rod six or eight feet above the highest part of the building, tapering it gradually to a fine sharp point, which is gilt to prevent its rusting.

Thus the pointed rod either prevents a stroke from the cloud, or, if a stroke is made, conducts it to the earth with safety to the building.

The lower end of the rod should enter the earth so deep as to come at the moist part, perhaps two or three feet; and if bent when under the surface so as to go in a horizontal line six or eight feet from the wall, and then bent again downwards three or four feet, it will prevent damage to any of the stones of the foundation.

A person apprehensive of danger from lightning, happening during the time of thunder to be in a house not so secured, will do well to avoid sitting near the chimney, near a looking-glass, or any gilt pictures or wainscot; the safest place is the middle of the room (so it be not under a metal lustre suspended by a chain) sitting in one chair and laying the feet up in another. It is still safer to bring two or three mattrasses or beds into the middle of the room, and, folding them up double, place the chair upon them; for they not being so good conductors as the walls, the lightning will not choose an interrupted course through the air of the room and the bedding, when it can go through a continued better conductor, the wall. But where it can be had, a hammoc or swinging bed, suspended by silk cords equally distant from the walls on every side, and from the ceiling and floor above and below, affords the safest situation a person can have in any room whatever; and what indeed may be deemed quite free from danger of any stroke by lightning.

B. FRANKLIN.

Paris, Sept. 1767.

Professor Winthrop to Dr. Franklin.

St. Bride's Steeple.—Utility of Electrical conductors to Steeples.—Singular kind of Glass Tube.

January 6th, 1768.

"—— I HAVE read in the Philosophical Transactions the account of the effects of lightning on St. Bride's steeple. It is amazing to me, that after the full demonstration you have given, of the identity of lightning and of electricity, and the power of metalline conductors, they should ever think of repairing that steeple without such conductors.—How astonishing is the force of prejudice, even in an age of so much knowledge and free inquiry!"

Answer to the above.

—— IT is perhaps not so extraordinary that unlearned men, such as commonly compose our church vestries, should not yet be acquainted with, and sensible of the benefits of metal conductors in averting the stroke of lightning, and preserving our houses from its violent effects, or that they should be still prejudiced against the use of such conductors, when we see how long even philosophers, men of extensive science and great ingenuity, can hold out against the evidence of new knowledge, that does not square with their preconceptions; and how long men can retain a practice that is conformable to their prejudices, and expect a benefit from such practice, though constant experience shows its inutility. A late piece of the Abbé Nollet, printed last year in the memoirs of the French Academy of Sciences, affords strong instances of this: for though the very relations he gives of the effects of lightning in several churches and other buildings, show clearly, that it was conducted from one part to another by wires, gildings, and other pieces of metal that were *within*, or connected with the building, yet in the same paper he objects to the providing metalline conductors *without* the building, as useless or dangerous.* He cautions people not to ring the church bells during a thunder storm, lest the lightning, in its way to the earth, should be conducted down to them by the bell ropes,† which are but bad conductors; and yet is against fixing metal rods on the outside of the steeple, which are known to be much better conductors, and which it would certainly choose to pass in rather than dry hemp. And

* Notre curiosité pourroit peut-être s'applaudir des recherches qu'elle nous a fait faire sur la nature du tonnèrre, et sur la mécanisme de ses principaux effets, mais ce n'est point ce qu'il y a de plus important; il vaudroit bien mieux que nous puissions trouver quelque moyen de nous en garantir; on y a pensé; on s'est même flatté d'avoir fait cette grande découverte; mais malheureusement douze années d'épreuves et un peu de réflexion, nous apprennent qu'il ne faut pas compter sur les promesses qu'on nous a faites Je l'ai dit, il y a long temps, et avec regret, toutes ces pointes de fer qu'on dresse en l'air, soit comme *electroscopes*, soit comme préservatifs,——sont plus propre à nous attirer le feu du tonnerre qu'à nous en préserver;——et je persiste à dire que le projet d'épuiser une nuée orageuse du feu dont elle est chargée, n'est pas celui d'un physicien.—*Memoire sur les Effets du Tonnerre.*

† Les cloches, en virtu de leur bénédiction, doivent écarter les orages et nous preserver des coups de foudre; mais l'église permet à la prudence humaine le choix des momens où il convient d'user de ce préservatif. Je ne sais si le son, considéré physiquement, est capable ou non de faire crever une nuée et de causer l'épanchement de son feu vers les objets terrèstres, mais il est certain et prouvé par l'expérience, que la tonnèrre peut tomber sur un clocher, soit que l'on y sonne point; et si cela arrive dans le premier cas, les sonneurs sont en grand danger, parcequ'ils tiennent des cordes par lesquelles la commotion de la foudre peut se communiquer jusq'à eux: il est donc plus sage de laisser les cloches en repos quand l'orage est arrivé au-dessus de l'église.—*Ibid.*

though for a thousand years past bells have been solemnly consecrated by the Romish church,* in expectation that the sound of such blessed bells would drive away those storms and secure our buildings from the stroke of lightning; and during so long a period, it has not been found by experience, that places within the reach of such blessed sound, are safer than others where it is never heard; but that on the contrary, the lightning seems to strike steeples of choice, and that at the very time the bells are ringing;† yet still they continue to bless the new bells, and jangle the old ones whenever it thunders.—One would think it was now time to try some other trick;—and ours is recommended (whatever this able philosopher may have been told to the contrary) by more than twelve years experience, wherein, among the great number of houses furnished with iron rods in North America, not one so guarded has been materially hurt with lightning, and several have been evidently preserved by their means; while a number of houses, churches, barns, ships, &c. in different places, unprovided with rods, have been struck and greatly damaged, demolished or burnt. Probably the vestries of our English churches are not generally well acquainted with these facts; otherwise, since as good protestants they have no faith in the blessing of bells, they would be less excusable in not providing this other security for their respective churches, and for the good people that may happen to be assembled in them during a tempest, especially as those buildings, from their greater height, are more exposed to the stroke of lightning than our common dwellings.

I have nothing new in the philosophical way to communicate to you, except what follows. When I was last year in Germany, I met with a singular kind of glass, being a tube about eight inches long, half an inch in diameter, with a hollow ball of near an inch in diameter at one end, and one of an inch and half at the other, hermetically sealed, and half filled with water.—If one end is held in the hand, and the other a little elevated above the level, a constant succession of large bubbles proceeds from the end in the hand to the other end, making an appearance that puzzled me much, till I found that the space not filled with water was also free from air, and either filled with a subtle invisible vapour continually rising from the water, and extremely rarefiable by the least heat at one end, and condensable again by the least coolness at the other; or it is the very fluid of fire itself, which parting from the hand pervades the glass, and by its expansive force depresses the water till it can pass between it and the glass, and escape to the other end, where it gets through the glass again into the air. I am rather inclined to the first opinion, but doubtful between the two. An ingenious artist here, Mr. Nairne, mathematical instrument-maker, has made a number of them from mine, and improved them, for his are much more sensible than those I brought from Germany.—I bored a very small hole through the wainscot in the seat of my window, through which a little cold air constantly entered, while the air in the room was kept warmer by fires daily made in it, being winter time. I placed one of his glasses, with the elevated end against this hole; and the bubbles from the other end, which was in a warmer situation, were continually passing day and night, to the no small surprise of even philosophical spectators. Each bubble discharged is larger than that from which it proceeds, and yet that is not diminished; and by adding itself to the bubble at the other end, that bubble is not increased, which seems very paradoxical. When the balls at each end are made large, and the connecting tube very small and bent at right angles, so that the balls, instead of being at the ends, are brought on the side of the tube, and the tube is held so as that the balls are above it, the water will be depressed in that which is held in the hand, and rise in the other as a jet or fountain; when it is all in the other, it begins to boil, as it were, by the vapour passing up through it; and the instant it begins to boil, a sudden coldness is felt in the ball held; a curious experiment, this, first observed and shown me by Mr. Nairne. There is something in it similar to the old observation, I think mentioned by Aristotle, that the bottom of a boiling pot is not warm; and perhaps it may help to explain that fact;—if indeed it be a fact.—When the water stands at an equal height in both these balls, and all at rest; if you wet one of the balls by means of a feather dipt in spirit, though that spirit is of the same temperament as to heat and cold with the water in the glasses, yet the cold occasioned by the evaporation of the spirit from the wetted ball will so condense the vapour over the water contained in that ball, as that the water of the other ball will be pressed up into it, followed

* Suivant le rituel de Paris, lorsqu'on bénit des cloches, on recite les oraisons suivantes:

Benedic, Domine . . . . . quotiescumque sonuerit, procul recedat virtus insidiantium, umbra phantasmatis, incursio turbinum, percussio fulminum, læsio tonitruum, calamitas tempestatum, omnisque spiritus procellarum, &c.

Deus, qui per beatum Moisen, &c . . . . . procul pellantur insidiæ inimici, fragor grandinum, procella turbinum, impetus tempestatum, temperentur infesta tonitrua, &c

Omnipotens sempiterne Deus, &c. . . . . ut ante sonitum ejus effugentur ignita jacula inimici, percussio fulminum, impetus lapidum, læsio tempestatum, &c.

† En 1718. M. Deslandes fit savoir à l'Academie Royale des sciences, que la nuit du 14 ou 15 d'Avril de la même année, le tonnerre étoit tombé sur vingtquatre églises, depuis Landernau jusqu'à Saint Pol-de-Leon en Bretagne; que ces églises étoient précisément celles où l'on sonnoit, et que la foudre avoit épargné celles où l'on ne sonnoit pas: que dans celle de Gouisnou, qui fut entièrement ruinée, le tonnerre tua deux personnes de quatre qui sonnoient, &c.—*Hist. de l'Ac. R. des. Sci.* 1719.

by a succession of bubbles, till the spirit is all dried away. Perhaps the observations on these little instruments may suggest and be applied to some beneficial uses. It has been thought, that water reduced to vapour by heat was rarefied only fourteen thousand times, and on this principle our engines for raising water by fire are said to be constructed: but if the vapour so much rarefied from water, is capable of being itself still farther rarefied to a boundless degree by the application of heat to the vessels or parts of vessels containing the vapour (as at first it is applied to those containing the water) perhaps a much greater power may be obtained, with little additional expense. Possibly too, the power of easily moving water from one end to the other of a moveable beam (suspended in the middle like a scale-beam) by a small degree of heat, may be applied advantageously to some other mechanical purposes.

B. FRANKLIN.

Experiments, Observations, and Facts, tending to support the Opinion of the utility of long pointed Rods, for securing Buildings from Damage by Strokes of Lightning.—Read at the committee appointed to consider the erection of conductors to secure the magazines at Purfleet, Aug. 27, 1772.

EXPERIMENT I.

THE prime conductor of an electric machine, A, B (*See the plate*) being supported about 10 inches and a half above the table by a wax-stand, and under it erected a *pointed wire* 7 inches and a half high, and one fifth of an inch thick, and tapering to a sharp point, and communicating with the table; when the *point* (being uppermost) is *covered* by the end of a finger, the conductor may be full charged, and the electrometer, *c*, (Mr. Henley's) will rise to the height indicating a full charge: but the moment the point is *uncovered*, the ball of the electrometer drops, showing the prime conductor to be instantly discharged and nearly emptied of its electricity. Turn the wire its *blunt* end upwards (which represents an unpointed bar) and no such effect follows, the electrometer remaining at its usual height when the prime conductor is charged.

OBSERVATION.

What quantity of lightning, a high pointed rod well communicating with the earth may be expected to discharge from the clouds silently in a short time, is yet unknown; but I have reason from a particular fact to think it may at some times be very great. In Philadelphia I had such a rod fixed to the top of my chimney, and extending about nine feet above it. From the foot of this rod, a wire (the thickness of a goose-quill) came through a covered glass tube in the roof, and down through the well of the staircase; the lower end connected with the iron spear of a pump. On the staircase opposite to my chamber door, the wire was divided; the ends separated about six inches, a little bell on each end; and between the bells a little brass ball suspended by a silk thread, to play between and strike the bells when clouds passed with electricity in them. After having frequently drawn sparks and charged bottles from the bell of the upper wire, I was one night awaked by loud cracks on the staircase. Starting up and opening the door, I perceived that the brass ball instead of vibrating as usual between the bells, was repelled and kept at a distance from both; while the fire passed sometimes in very large quick cracks from bell to bell; and sometimes in a continued dense white stream, seemingly as large as my finger, whereby the whole staircase was enlighted as with sunshine, so that one might see to pick up a pin.* And from the apparent quantity thus discharged, I cannot but conceive that a *number*† of such conductors must considerably lessen that of any approaching cloud, before it comes so near as to deliver its contents in a general stroke:—an effect not to be expected from bars *unpointed*; if the above experiment with the blunt end of the wire is deemed pertinent to the case.

EXPERIMENT II.

The pointed wire under the prime conductor continuing of the same height, *pinch* it between the thumb and finger near the top, so as *just to conceal* the point; then turning the globe, the electrometer will rise and mark the full charge. Slip the fingers down so as to discover about half an inch of the wire, then another half inch, and then another; at every one of these motions *discovering more and more* of the pointed wire; you will see the electrometer fall quick and proportionably, stopping when you stop. If you slip down the *whole distance* at once, the ball falls instantly down to the stem.

OBSERVATION.

From this experiment it seems that a greater effect in drawing off the lightning

* Mr. de Romas saw still greater quantities of lightning brought down by the wire of his kite. He had "explosions from it, the noise of which greatly resembled that of thunder, and were heard (from without) into the heart of the city, notwithstanding the various noises there. The fire seen at the instant of the explosion had the shape of a spindle eight inches long and five lines in diameter. Yet from the time of explosion to the end of the experiment, no lightning was seen above, nor any thunder heard. At another time the streams of fire issuing from it were observed to be an inch thick and ten feet long."—*See Dr. Priestley's History of Electricity*, pages 134—136, *first edition*.

† Twelve were proposed on and near the magazines at Purfleet.

from the clouds may be expected from *long* pointed rods, than from *short* ones; I mean from such as show the greatest length, *above the building* they are fixed on.

EXPERIMENT III.

Instead of pinching the point between the thumb and finger, as in the last experiment, keep the thumb and finger each at *near an inch distance* from it, but at the *same height*, the point between them. In this situation, though the point is fairly exposed to the prime conductor, it has little or no effect; the electrometer rises to the height of a full charge. But the moment the fingers are *taken away*, the ball falls quick to the stem.

OBSERVATION.

To explain this, it is supposed, that one reason of the sudden effect produced by a long naked pointed wire is, that (by the repulsive power of the positive charge in the prime conductor) the natural quantity of electricity contained in the pointed wire is driven down into the earth; and the point of the wire made strongly *negative;* whence it attracts the electricity of the prime conductor more strongly than bodies in their natural state would do; the *small quantity of common matter* in the point, not being able by its attractive force to retain its *natural quantity of the electric fluid*, against the force of that repulsion.—But the finger and thumb being substantial and blunt bodies, though as near the prime conductor, hold up better their *own* natural quantity against the force of that repulsion; and so, continuing nearly in their natural state, they jointly operate on the electric fluid in the point, opposing its descent and *aiding the point* to retain it; contrary to the repelling power of the prime conductor, which would drive it down.—And this may also serve to explain the different powers of the point in the preceding experiment, on the slipping down the finger and thumb to different distances.

Hence is collected, that a pointed rod erected *between two tall chimnies*, and very little higher (an instance of which I have seen) cannot have so good an effect, as if it had been erected on one of the chimnies, its whole length above it.

EXPERIMENT IV

If, *instead* of a long pointed wire, a *large solid body* (to represent a building without a point) be brought under and as near the prime conductor, when charged; the ball of the electrometer will *fall* a little; and on taking away the large body, will *rise again*.

OBSERVATION.

Its *rising again* shows that the prime conductor lost little or none of its electric charge, as it had done through the point: the *falling* of the ball while the large body was under the conductor therefore shows, that a quantity of its atmosphere was drawn from the end where the electrometer is placed to the part immediately over the large body, and there accumulated *ready* to strike into it with its whole undiminished force, as soon as within the striking distance; and, were the prime conductor moveable like a *cloud*, it would approach the body by attraction till within that distance. The swift motion of clouds, as driven by the winds, probably prevents this happening so often as otherwise it might do: for, though parts of the cloud may stoop towards a building as they pass, in consequence of such attraction, yet they are carried forward beyond the striking distance, before they could by their descending come within it.

EXPERIMENT V.

Attach a small light *lock of cotton* to the underside of the prime conductor, so that it may hang down towards the pointed wire mentioned in the first experiment. *Cover* the point with your finger, and the globe being turned, the cotton will extend itself, stretching down towards the finger, as at *a;* but on *uncovering* the point, it instantly flies up to the prime conductor, as at *b*, and continues there as long as the point is uncovered. The moment you cover it again, the cotton flies down again, extending itself towards the finger; and the same happens in degree, if (instead of the finger) you use, uncovered, the *blunt* end of the wire uppermost.

OBSERVATION.

To explain this, it is supposed that the cotton, by its connexion with the prime conductor, receives from it a quantity of its electricity; which occasions its being attracted by the *finger* that remains still in nearly its natural state. But when a *point* is opposed to the cotton, its electricity is thereby taken from it, faster than it can at a distance be supplied with a fresh quantity from the conductor. Therefore being reduced *nearer* to the natural state, it is attracted *up* to the electrified prime conductor; *rather than down*, as before, to the finger.

Supposing farther that the prime conductor represents a cloud charged with the electric fluid; the cotton, a ragged fragment of cloud (of which the underside of great thunder-clouds are seen to have many) the finger, a chimney or highest part of a building.—We then may conceive that when such a cloud passes over a *building*, some one of its ragged under-hanging fragments may be drawn down by the chimney or other high part of the edifice; creating thereby a *more easy communication* between it and the great cloud.—But a *long pointed rod* being presented to this fragment, may occasion its receding, like the cotton, up to the great cloud; and thereby *increase*, instead *of lessening* the distance, so

as often to make it *greater* than the striking distance. Turning the *blunt end of a wire* uppermost (which represents the unpointed bar) it appears that the same good effect is not from that to be expected. A long pointed rod, it is therefore imagined, may *prevent* some strokes; as well as *conduct* others that fall upon it, when a great body of cloud comes on so heavily that the above repelling operation on fragments cannot take place.

EXPERIMENT VI.

Opposite the side of the prime conductor, place *separately* isolated by wax stems, Mr. Canton's two boxes with pith balls suspended by fine linen threads. On each box, lay a wire six inches long and one fifth of an inch thick, tapering to a sharp point; but so laid as that four inches of the *pointed* end of *one* wire, and an equal length of the *blunt* end of the *other*, may project beyond the ends of the boxes; and both at eighteen inches distance from the prime conductor. Then charging the prime conductor by a turn or two of the globe, the balls of each pair will separate; those of the box, whence the point projects most, *considerably*; the others *less*. Touch the prime conductor, and those of the box with the *blunt* point will *collapse*, and join. Those connected with the *point* will at the same time approach each other, *till* within about an inch, and there *remain*.

OBSERVATION.

This seems a proof, that though the small sharpened part of the wire must have had a *less natural* quantity in it, before the operation, than the thick blunt part; yet a greater quantity was *driven down from it* to the balls. Thence it is again inferred, that the pointed rod is rendered *more negative:* and farther, that if a *stroke must fall* from the cloud over a building, furnished with such a rod, it is more likely to be drawn to that pointed rod, than to a blunt one; as being more strongly negative, and of course its attraction stronger. And it seems more eligible, that the lightning should fall on the point of the conductor (provided to convey it into the earth) than on any other part of the building, *thence* to proceed to such conductor: which end is also more likely to be obtained by the length and loftiness of the rod; as protecting more extensively the building under it.

It has been *objected*, that erecting pointed rods upon *edifices*, is to *invite* and draw the lightning into *them*; and therefore dangerous. Were such rods to be erected on buildings, *without continuing the communication* quite down into the moist earth, this objection might then have weight; but when such complete conductors are made, the lightning is invited not into the building, but into the *earth*, the situation it aims at, and which it always seizes every help to obtain, even from broken partial metalline conductors.

It has also been suggested, that from such electric experiments *nothing certain can be concluded as to the great operations of nature*; since it is often seen, that experiments which have succeeded in small, in large have failed. It is true that in mechanics this has sometimes happened. But when it is considered that we owe our first knowledge of the nature and operations of lightning, to observations on such small experiments; and that on carefully comparing the most accurate accounts of former facts, and the exactest relations of those that have occurred since, the effects have surprisingly agreed with the theory; it is humbly conceived that in natural philosophy, in this branch of it at least, the suggestion has not so much weight; and that the farther new experiments now adduced in recommendation of *long* sharp-pointed rods, may have some claim to credit and consideration.

It has been urged too, that though points may have considerable effects on a *small* prime conductor at *small distances*; yet on *great* clouds and at *great distances*, nothing is to be expected from them. To this it is answered, that in those *small* experiments it is evident the points act at a greater than the *striking* distance; and in the large way, their service is *only expected* where there is *such* nearness of the cloud, as to *endanger a stroke*; and there, it cannot be doubted the points must have some effect. And if the quantity discharged by a single pointed rod may be so considerable as I have shown it; the quantity discharged by a number will be proportionably greater.

But this part of the theory does not depend alone on *small* experiments. Since the practice of erecting pointed rods in America (now near twenty years) five of them have been struck by lightning, viz. Mr. Raven's and Mr. Maine's, in South Carolina; Mr. Tucker's, in Virginia; Mr. West's and Mr. Moulder's, in Philadelphia. Possibly there may have been more that have not come to my knowledge. But in every one of these, the lightning did *not* fall upon the *body of the house*, but precisely on the several *points* of the rods; and, though the conductors were sometimes *not sufficiently large and complete*, was conveyed into the earth, without any material damage to the buildings. Facts then *in great*, as far as we have them authenticated, justify the opinion that is drawn from the experiments *in small* as above related.

It has also been objected, that unless we knew the quantity that might *possibly* be discharged at one stroke from the clouds, we cannot be sure we have provided *sufficient* conductors; and therefore cannot depend on

their conveying away *all* that may fall on their points. Indeed we have nothing to form a judgment by in this but past facts; and we know of no instance where a *complete* conductor to the moist earth *has* been insufficient, if half an inch diameter. It is probable that many strokes of lightning have been conveyed through the common leaden pipes affixed to houses to carry down the water from the roof to the ground: and there is no account of such pipes being melted and destroyed, as must sometimes have happened if they had been insufficient. We can then only judge of the dimensions proper for a conductor of lightning, as we do of those proper for a *conductor of rain*, by past observation. And as we think a pipe of three inches bore sufficient to carry off the rain that falls on a square of 20 feet, because we never saw such a pipe glutted by any shower; so we may judge a conductor of an inch diameter, more than sufficient for any stroke of lightning that will fall on its point. It is true, that if another deluge should happen wherein the windows of heaven are to be opened, such pipes may be unequal to the falling quantity; and if God for our sins should think fit to rain fire upon us, as upon some cities of old, it is not expected that our conductors of whatever size, should secure our houses against a miracle. Probably as water drawn up into the air and there forming clouds, is disposed to fall again in *rain* by its natural gravity, as soon as a number of particles sufficient to make a drop can get together; so when the clouds are (by whatever means) over or undercharged with the *electric fluid*, to a degree sufficient to attract them towards the earth, the equilibrium is restored, before the difference becomes great beyond that degree. Mr. Lane's *electrometer*, for limiting precisely the quantity of a shock that is to be administered in a medical view, may serve to make this more easily intelligible. The discharging knob does by a screw approach the conductor to the distance intended, but there remains fixed. Whatever power there may be in the glass globe to collect the fulminating fluid, and whatever capacity of receiving and accumulating it there may be in the bottle or glass jar; yet neither the accumulation nor the discharge ever exceeds the destined quantity. Thus, were the *clouds* always at a certain fixed distance from the earth, all discharges would be made when the quantity accumulated was equal to the distance: but there is a circumstance which by occasionally lessening the distance, lessens the discharge; to wit, the moveableness of the clouds, and their being drawn nearer to the earth by attraction when electrified; so that discharges are thereby rendered more frequent and of course less violent. Hence whatever the quantity may be in nature, and whatever the power in the clouds of collecting it; yet an accumulation and force beyond what mankind has hitherto been acquainted with is scarce to be expected.*

B. F.

August 27, 1772.

To Professor Landriani, Italy.

On the Utility of Electrical Conductors.

PHILADELPHIA, Oct. 14, 1787.

I HAVE received the excellent work *upon the Utility of Electrical Conductors*, which you had the goodness to send me. I read it with great pleasure, and beg you to accept my sincere thanks for it.

Upon my return to this country, I found the number of conductors much increased, many proofs of their efficacy in preserving buildings from lightning having demonstrated their utility. Among other instances, my own house was one day attacked by lightning, which occasioned the neighbours to run in to give assistance, in case of its being on fire. But no damage was done, and my family was only found a good deal frightened with the violence of the explosion.

Last year, my house being enlarged, the conductor was obliged to be taken down. I found, upon examination, that the pointed termination of copper, which, was originally nine inches long, and about one third of an inch in diameter in its thickest part, had been almost entirely melted; and that its connexion with the rod of iron below was very slight. Thus, in the course of time, this invention has proved of use to the author of it, and has added this personal advantage to the pleasure he before received, from having been useful to others.

Mr. Rittenhouse, our astronomer, has informed me, that having observed with his excellent telescope, many conductors that are within the field of his view, he has remarked in various instances, that the points were melted in like manner. There is no example of a house, provided with a perfect conduct-

* The immediate occasion of the dispute concerning the preference between pointed and blunt conductors of lightning, arose as follows:—A powder-mill having blown up at Brescia, in consequence of its being struck with lightning, the English board of ordinance applied to their painter, Mr. Wilson, then of some note as an electrician, for a method to prevent the like accident to their magazines at Purfleet. Mr. Wilson having advised a blunt conductor, and it being understood that Dr. Franklin's opinion formed upon the spot, was for a pointed one; the matter was referred in 1772, to the Royal Society, and by them as usual, to a committee, who, after consultation, prescribed a method conformable to Dr. Franklin's theory. But a harmless stroke of lightning, having under particular circumstances, fallen upon one of the buildings and its apparatus in May 1777; the subject came again into violent agitation, and was again referred to the society, and by the society again referred to a new committee, which committee confirmed the decision of the first committee; it produced an acrimonious controversy in the Royal Society, and a series of pamphlets; which, however ended in the triumph of the Franklinian theory.

or, which has suffered any considerable damage; and even those which are without them have suffered little, since conductors have become common in this city.

B. FRANKLIN.

John Pringle, M. D.

On the Effects of Electricity in Paralytic Cases.

CRAVEN-STREET, Dec. 21, 1757.

IN compliance with your request, I send you the following account of what I can at present recollect relating to the effects of electricity in paralytic cases, which have fallen under my observation.

Some years since, when the newspapers made mention of great cures performed in Italy and Germany, by means of electricity, a number of paralytics were brought to me from different parts of Pennsylvania, and the neighbouring provinces, to be electrised, which I did for them at their request. My method was, to place the patient first in a chair, on an electric stool, and draw a number of large strong sparks from all parts of the affected limb or side. Then I fully charged two six-gallon glass jars, each of which had about three square feet of surface coated; and sent the united shock of these through the affected limb or limbs, repeating the stroke commonly three times each day. The first thing observed, was an immediate greater sensible warmth in the lame limbs that had received the stroke, than in the others; and the next morning the patients usually related, that they had in the night felt a pricking sensation in the flesh of the paralytic limbs; and would sometimes show a number of small red spots, which they supposed were occasioned by those prickings. The limbs, too, were found more capable of voluntary motion, and seemed to receive strength. A man, for instance, who could not the first day lift the lame hand from off his knee, would the next day raise it four or five inches, the third day higher; and on the fifth day was able, but with a feeble languid motion, to take off his hat. These appearances gave great spirits to the patients, and made them hope a perfect cure; but I do not remember that I ever saw any amendment after the fifth day; which the patients perceiving, and finding the shocks pretty severe, they became discouraged, went home, and in a short time relapsed; so that I never knew any advantage from electricity in palsies that was permanent. And how far the apparent temporary advantage might arise from the exercise in the patients' journey, and coming daily to my house, or from the spirits given by the hope of success, enabling them to exert more strength in moving their limbs, I will not pretend to say.

Perhaps some permanent advantage might have been obtained, if the electric shocks had been accompanied with proper medicine and regimen, under the direction of a skilful physician. It may be, too, that a few great strokes, as given in my method, may not be so proper as many small ones; since by the account from Scotland of a case, in which two hundred shocks from a phial were given daily, it seems, that a perfect cure has been made. As to any uncommon strength supposed to be in the machine used in that case, I imagine it could have no share in the effect produced; since the strength of the shock from charged glass, is in proportion to the quantity of surface of the glass coated: so that my shock from those large jars, must have been much greater than any that could be received from a phial held in the hand.

B. FRANKLIN.

Electrical Experiments on Amber.

Saturday, July 3, 1762.

To try, at the request of a friend, whether amber finely powdered might be melted and run together again by means of the electric fluid, I took a piece of small glass tube, about two inches and a half long, the bore about one twelfth of an inch diameter, the glass itself about the same thickness; I introduced into this tube some powder of amber, and with two pieces of wire nearly fitting the bore, one inserted at one end, the other at the other, I rammed the powder hard between them in the middle of the tube, where it stuck fast, and was in length about half an inch. Then leaving the wires in the tube, I made them part of the electric circuit, and discharged through them three rows of my case of bottles. The event was, that the glass was broke into very small pieces, and those dispersed with violence in all directions. As I did not expect this, I had not, as in other experiments, laid thick paper over the glass to save my eyes, so several of the pieces struck my face smartly, and one of them cut my lip a little so as to make it bleed. I could find no part of the amber; but the table where the tube lay was stained very black in spots, such as might be made by a thick smoke forced on it by a blast, and the air was filled with a strong smell, somewhat like that from burnt gunpowder. Whence I imagined, that the amber was burnt, and had exploded as gunpowder would have done in the same circumstances.

That I might better see the effect on the amber, I made the next experiment in a tube formed of a card rolled up and bound strongly with packthread. Its bore was about one eighth of an inch diameter. I rammed powder of amber into this as I had done in the other, and as the quantity of amber was greater, I increased the quantity of electric fluid by discharging through it at once five rows of my bottles. On opening the tube, I

found that some of the powder had exploded, an impression was made on the tube, though it was not hurt, and most of the powder remaining was turned black, which I suppose might be by the smoke forced through it from the burned part: some of it was hard; but as it powdered again when pressed by the fingers, I suppose that hardness not to arise from melting any parts in it, but merely from my ramming the powder when I charged the tube.

B. FRANKLIN.

To Thomas Ronayne, Esq. Cork, Ireland.

On the Electricity of the Fogs in Ireland.

London, April 20. 1766.

I have received your very obliging and very ingenious letter by captain Kearney. Your observations upon the electricity of fogs, and the air in Ireland, and upon different circumstances of storms, appear to me very curious, and I thank you for them. There is not, in my opinion, any part of the earth whatever, which is, or can be, naturally in a state of negative electricity: and though different circumstances may occasion an inequality in the distribution of the fluid, the equilibrium is immediately restored by means of its extreme subtlety, and of the excellent conductors with which the humid earth is amply provided. I am of opinion, however, that when a cloud, well charged positively, passes near the earth, it repels and forces down into the earth, that natural portion of electricity, which exists near its surface, and in buildings, trees, &c. so as actually to reduce them to a negative state before it strikes them. I am of opinion too, that the negative state in which you have frequently found the balls, which are suspended from your apparatus, is not always occasioned by clouds in a negative state; but more commonly by clouds positively electrified, which have passed over them, and which in their passage have repelled and driven off a part of the electrical matter, which naturally existed in the apparatus; so that what remained after the passing of the clouds, diffusing itself uniformly through the apparatus, the whole became reduced to a negative state.

If you have read my experiments made in continuation of those of Mr. Canton, you will readily understand this; but you may easily make a few experiments, which will clearly demonstrate it. Let a common glass be warmed before the fire that it may continue very dry for some time; set it upon a table, and place upon it the small box made use of by Mr. Canton, so that the balls may hang a little beyond the edge of the table. Rub another glass, which has previously been warmed in a similar manner, with a piece of black silk or silk handkerchief, in order to electrify it. Hold then the glass above the little box, at about the distance of three or four inches from that part which is most distant from the balls, and you will see the balls separate from each other, being positively electrified by the natural portion of electricity, which was in the box, and which is driven to the further part of it by the repulsive power of the atmosphere in the excited glass. Touch the box near the little balls (the excited glass continuing in the same state) and the balls will again unite; the quantity of electricity which had been driven to this part being drawn off by your finger. Withdraw then both your finger and the glass at the same instant, and the quantity of electricity which remained in the box, uniformly diffusing itself, the balls will again be separated; being now in a negative state. While things are in this situation, begin once more to excite your glass, and hold it above the box, but not too near, and you will find, that when brought within a certain distance, the balls will at first approach each other, being then in a natural state. In proportion as the glass is brought nearer, they will again separate, being positive. When the glass is moved beyond them, and at some little further distance, they will unite again, being in a natural state. When it is entirely removed, they will separate again, being then made negative. The excited glass in this experiment may represent a cloud positively charged, which you see is capable of producing in this manner all the different changes in the apparatus, without the least necessity for supposing any negative cloud.

I am nevertheless fully convinced, that there are negative clouds; because they sometimes absorb, through the medium of the apparatus, the positive electricity of a large jar, the hundredth part of which the apparatus itself would have not been able to receive or contain at once. In fact, it is not difficult to conceive, that a large cloud, highly charged positively, may reduce smaller clouds to a negative state, when it passes above or near them, by forcing a part of their natural portion of the fluid either to their inferior surfaces, whence it may strike into the earth, or to the opposite side, whence it may strike into the adjacent clouds; so that when the large cloud has passed off to a distance, the small clouds shall remain in a negative state, exactly like the apparatus; the former (like the latter) being frequently insulated bodies, having communication neither with the earth nor with other clouds. Upon the same principle it may easily be conceived, in what manner a large negative cloud may render others positive.

The experiment which you mention, of filling your glass, is analogous to one which I made in 1751 or 1752. I had supposed in my preceding letters, that the pores of glass were smaller in the interior parts than near

the surface, and that on this account they prevented the passage of the electrical fluid. To prove whether this was actually the case or not, I ground one of my phials in a part where it was extremely thin, grinding it considerably beyond the middle, and very near to the opposite superfices, as I found, upon breaking it after the experiment. It was charged nevertheless after being ground, equally well as before, which convinced me, that my hypothesis on this subject was erroneous. It is difficult to conceive where the immense superfluous quantity of electricity on the charged side of a glass is deposited.

I send you my paper concerning meteors, which was lately published here in the Philosophical Transactions, immediately after a paper by Mr. Hamilton on the same subject.

B. FRANKLIN.

Mode of ascertaining, whether the Power, giving a Shock to those who touch either the Surinam Eel, or the Torpedo, be electrical.

1. Touch the fish with a stick of dry sealing-wax, or a glass rod, and observe if the shock be communicated by means of those bodies.

Touch the same fish with an iron, or other metalline rod.

If the shock be communicated by the latter body, and not by the others, it is probably not the mechanical effect, as has been supposed, of some muscular action in the fish, but of a subtle fluid, in this respect analogous at least to the electric fluid.

2. Observe farther, whether the shock can be conveyed without the metal being actually in contact with the fish, and if it can, whether, in the space between, any light appear, and a slight noise or crackling be heard.

If so, these also are properties common to the electric fluid.

3. Lastly, touch the fish with the wire of a small Leyden bottle, and if the shock can be received across, observe whether the wire will attract and repel light bodies, and you feel a shock, while holding the bottle in one hand, and touching the wire with the other.

If so, the fluid, capable of producing such effects, seems to have all the known properties of the electric fluid.

Addition, 12th of August, 1772,

In consequence of the Experiments and Discoveries made in France by Mr. Walsh, and communicated by him to Dr. Franklin.

Let several persons, standing on the floor, hold hands, and let one of them touch the fish, so as to receive a shock. If the shock be felt by all, place the fish flat on a plate of metal, and let one of the persons holding hands touch this plate, while the person farthest from the plate touches the upper part of the fish, with a metal rod: then observe, if the force of the shock be the same as to all the persons forming the circle, or is stronger than before.

Repeat this experiment with this difference: let two or three of the persons forming the circle, instead of holding by the hand, hold each an uncharged electrical bottle, so that the little balls at the end of the wires may touch, and observe, after the shock, if these wires will attract and repel light bodies, and if a ball of cork, suspended by a long silk string between the wires, a little distance from the bottles, will be alternately attracted and repelled by them.

To M. Dubourg,

On the Analogy between Magnetism and Electricity.

London, March 10, 1773.

As to the magnetism, which seems produced by electricity, my real opinion is, that these two powers of nature have no affinity with each other, and that the apparent production of magnetism is purely accidental. The matter may be explained thus:

1st, The earth is a great magnet.

2dly, There is a subtle fluid, called the magnetic fluid, which exists in all ferruginous bodies, equally attracted by all their parts, and equally diffused through their whole substance; at least where the equilibrium is not disturbed by a power superior to the attraction of the iron.

3dly, This natural quantity of the magnetic fluid, which is contained in a given piece of iron, may be put in motion so as to be more rarefied in one part and more condensed in another; but it cannot be withdrawn by any force that we are yet made acquainted with, so as to leave the whole in a negative state, at least relatively to its natural quantity; neither can it be introduced so as to put the iron into a positive state, or render it *plus*. In this respect, therefore, magnetism differs from electricity.

4thly, A piece of soft iron allows the magnetic fluid which it contains to be put in motion by a moderate force, so that being placed in a line with the magnetic pole of the earth, it immediately acquires the properties of a magnet; its magnetic fluid being drawn or forced from one extremity to the other; and this effect continues as long as it remains in the same position, one of its extremities becoming positively magnetised, and the other negatively. This temporary magnetism ceases as soon as the iron is turned east and west, the fluid immediately diffusing itself equally through the whole iron, as in its natural state.

5thly, The magnetic fluid in hard iron, or steel, is put in motion with more difficulty,

requiring a force greater than the earth to excite it; and when once it has been forced from one extremity of the steel to the other, it is not easy for it to return; and thus a bar of steel is converted into a permanent magnet.

6thly, A great heat, by expanding the substance of this steel, and increasing the distance between its particles, affords a passage to the electric fluid, which is thus again restored to its proper equilibrium; the bar appearing no longer to possess magnetic virtue.

7thly, A bar of steel which is not magnetic, being placed in the same position, relatively to the pole of the earth, which the magnetic needle assumes, and in this position being heated and suddenly cooled, becomes a permanent magnet. The reason is, that while the bar was hot, the magnetic fluid which it naturally contained was easily forced from one extremity to the other by the magnetic virtue of the earth; and that the hardness and condensation, produced by the sudden cooling of the bar, retained it in this state without permitting it to resume its original situation.

8thly, The violent vibrations of the particles of a steel bar, when forcibly struck in the same position, separate the particles in such a manner during their vibration, that they permit a portion of the magnetic fluid to pass, influenced by the natural magnetism of the earth; and it is afterwards so forcibly retained by the re-approach of the particles when the vibration ceases, that the bar becomes a permanent magnet.

9thly, An electric shock passing through a needle in a like position, and dilating it for an instant, renders it, for the same reason, a permanent magnet; that is, not by imparting magnetism to it, but by allowing its proper magnetic fluid to put itself in motion.

10thly, Thus, there is not in reality more magnetism in a given piece of steel after it is become magnetic, than existed in it before. The natural quantity is only displaced or repelled. Hence it follows, that a strong apparatus of magnets may charge millions of bars of steel, without communicating to them any part of its proper magnetism; only putting in motion the magnetism which already existed in these bars.

I am chiefly indebted to that excellent philosopher of Petersburgh, Mr. Æpinus, for this hypothesis, which appears to me equally ingenious and solid. I say, *chiefly*, because, as it is many years since I read his book, which I have left in America, it may happen, that I may have added to or altered it in some respect; and if I have misrepresented any thing, the error ought to be charged to my account.

If this hypothesis appears admissible, it will serve as an answer to the greater part of your questions. I have only one remark to add, which is, that however great the force is of magnetism employed, you can only convert a given portion of steel into a magnet of a force proportioned to its capacity of retaining its magnetic fluid in the new position in which it is placed, without letting it return. Now this power is different in different kinds of steel, but limited in all kinds whatever.

B. FRANKLIN.

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*To Messrs. Dubourg and d'Alibard.**

Concerning the Mode of rendering Meat tender by Electricity.

My answer to your questions concerning the mode of rendering meat tender by electricity, can only be founded upon conjecture; for I have not experiments enough to warrant the facts. All that I can say at present is, that I think electricity might be employed for this purpose, and I shall state what follows as the observations or reasons, which make me presume so.

It has been observed, that lightning, by rarefying and reducing into vapour the moisture contained in solid wood, in an oak, for instance, has forcibly separated its fibres, and broken it into small splinters; that by penetrating intimately the hardest metals, as iron, it has separated the parts in an instant, so as to convert a perfect solid into a state of fluidity: it is not then improbable, that the same subtle matter, passing through the bodies of animals with rapidity, should possess sufficient force to produce an effect nearly similar.

The flesh of animals, fresh killed in the usual manner, is firm, hard, and not in a very eatable state, because the particles adhere too forcibly to each other. At a certain period, the cohesion is weakened and in its progress towards putrefaction, which tends to produce a total separation, the flesh becomes what we call tender, or is in that state most proper to be used as our food.

It has frequently been remarked, that animals killed by lightning putrefy immediately. This cannot be invariably the case, since a quantity of lightning sufficient to kill, may not be sufficient to tear and divide the fibres and particles of flesh, and reduce them to that tender state, which is the prelude to putrefaction. Hence it is, that some animals killed in this manner will keep longer than others. But the putrefaction sometimes proceeds with surprising celerity. A respectable person assured me, that he once knew a remarkable instance of this: a whole flock of sheep in Scotland, being closely assembled under a tree, were killed by a flash of lightning; and it being rather late in the evening, the proprietor, desirous of saving something, sent persons early the next morning to flay them: but the putrefaction was such, and the stench so

* This letter has no date, but the one to which it is an answer is dated May 1, 1773.

abominable, that they had not the courage to execute their orders, and the bodies were accordingly buried in their skins. It is not unreasonable to presume, that between the period of their death and that of their putrefaction, a time intervened in which the flesh might be only tender, and only sufficiently so to be served at table. Add to this, that persons, who have eaten of fowls killed by our feeble imitation of lightning (electricity) and dressed immediately, have asserted, that the flesh was remarkably tender.

The little utility of this practice has perhaps prevented its being much adopted. For though it sometimes happens, that a company unexpectedly arriving at a country-house, or an unusual conflux of travellers to an inn, may render it necessary, to kill a number of animals for immediate use; yet as travellers have commonly a good appetite, little attention has been paid to the trifling inconvenience of having their meat a little tough. As this kind of death is nevertheless more sudden, and consequently less severe, than any other, if this should operate as a motive with compassionate persons to employ it for animals sacrificed for their use, they may conduct the process thus:

Having prepared a battery of six large glass jars (each from 20 to 24 pints) as for the Leyden experiment, and having established a communication, as usual, from the interior surface of each with the prime conductor, and having given them a full charge (which with a good machine may be executed in a few minutes, and may be estimated by an electrometer) a chain which communicates with the exterior of the jars must be wrapped round the thighs of the fowl; after which the operator, holding it by the wings, turned back and made to touch behind, must raise it so high that the head may receive the first shock from the prime conductor. The animal dies instantly. Let the head be immediately cut off to make it bleed, when it may be plucked and dressed immediately. This quantity of electricity is supposed sufficient for a turkey of ten pounds' weight, and perhaps for a lamb. Experience alone will inform us of the requisite proportions for animals of different forms and ages. Probably not less will be required to render a small bird, which is very old, tender, than for a larger one, which is young. It is easy to furnish the requisite quantity of electricity, by employing a greater or less number of jars. As six jars, however, discharged at once, are capable of giving a very violent shock, the operator must be very circumspect, lest he should happen to make the experiment on his own flesh, instead of that of the fowl.

B. FRANKLIN.

To M. Dubourg,

In Answer to some Queries concerning the choice of Glass for the Leyden experiment.

LONDON, June 1, 1773.

SIR,—I wish, with you, that some chemist (who should, if possible, be at the same time an electrician) would, in pursuance of the excellent hints contained in your letter, undertake to work upon glass with the view you have recommended. By means of a perfect knowledge of this substance, with respect to its electrical qualities, we might proceed with more certainty, as well in making our own experiments, as in repeating those which have been made by others in different countries, which I believe have frequently been attended with different success on account of differences in the glass employed, thence occasioning frequent misunderstandings and contrariety of opinions.

There is another circumstance much to be desired with respect to glass, and that is, that it should not be subject to break when highly charged in the Leyden experiment. I have known eight jars broken out of twenty, and at another time, twelve out of thirty-five. A similar loss would greatly discourage electricians desirous of accumulating a great power for certain experiments.—We have never been able hitherto to account for the cause of such misfortunes. The first idea which occurs is, that the positive electricity, being accumulated on one side of the glass, rushes violently through it, in order to supply the deficiency on the other side, and to restore the equilibrium. This however, I cannot conceive to be the true reason, when I consider, that a great number of jars being united, so as to be charged and discharged at the same time, the breaking of a single jar will discharge the whole; for, if the accident proceeded from the weakness of the glass, it is not probable, that eight of them should be precisely of the same degree of weakness, as to break every one at the same instant, it being more likely that the weakest should break first, and, by breaking, secure the rest; and again, when it is necessary to produce a certain effect, by means of the whole charge passing through a determined circle (as, for instance, to melt a small wire) if the charge, instead of passing in this circle, rushed through the sides of the jars, the intended effect would not be produced; which, however, is contrary to fact. For these reasons, I suspect, that there is, in the substance of the glass, either some little globules of air, or some portions of unvitrified sand or salt, into which a quantity of the electric fluid may be forced during the charge, and there retained till the general discharge: and that the force

being suddenly withdrawn, the elasticity of the fluid acts upon the glass in which it is enclosed, not being able to escape hastily without breaking the glass. I offer this only as a conjecture, which I leave to others to examine.

The globe which I had that could not be excited, though it was from the same glass-house which furnished the other excellent globes in my possession, was not of the same frit. The glass which was usually manufactured there, was rather of the green kind, and chiefly intended for drinking-glasses and bottles; but the proprietors being desirous of attempting a trial of white glass, the globe in question was of this frit. The glass not being of a perfect white, the proprietors were dissatisfied with it, and abandoned their project. I suspected that too great a quantity of salt was admitted into the composition; but I am no judge of these matters.

B. FRANKLIN.

Miss Stephenson.

Concerning the Leyden Bottle.

LONDON, March 22, 1762.

I MUST retract the charge of idleness in your studies, when I find you have gone through the doubly difficult task of reading so big a book, on an abstruse subject, and in a foreign language.

In answer to your question concerning the Leyden phial.—The hand that holds the bottle receives and conducts away the electric fluid that is driven out of the outside by the repulsive power of that which is forced into the inside of the bottle. As long as that power remains in the same situation, it must prevent the return of what it had expelled; though the hand would readily supply the quantity if it could be received. B. FRANKLIN.

Physical and Meteorological Observations, Conjectures, and Suppositions.—Read at the Royal Society, June 3, 1756.

THE particles of air are kept at a distance from each other by their mutual repulsion.

Every three particles, mutually and equally repelling each other, must form an equilateral triangle.

All the particles of air gravitate towards the earth, which gravitation compresses them, and shortens the sides of the triangles, otherwise their mutual repellency would force them to greater distances from each other.

Whatever particles of other matter (not endued with that repellency) are supported in air, must adhere to the particles of air, and be supported by them; for in the vacancies there is nothing they can rest on.

Air and water mutually attract each other. Hence water will dissolve in air, as salt in water.

The specific gravity of matter is not altered by dividing the matter, though the superfices be increased. Sixteen leaden bullets, of an ounce each, weigh as much in water as one of a pound, whose superfices is less.

Therefore the supporting of salt in water is not owing to its superfices being increased.

A lump of salt, though laid at rest at the bottom of a vessel of water, will dissolve therein, and its parts move every way, till equally diffused in the water, therefore there is a mutual attraction between water and salt. Every particle of water assumes as many of salt as can adhere to it; when more is added, it precipitates, and will not remain suspended.

Water, in the same manner, will dissolve in air, every particle of air assuming one or more particles of water. When too much is added, it precipitates in rain.

But there not being the same contiguity between the particles of air as of water, the solution of water in air is not carried on without a motion of the air, so as to cause a fresh accession of dry particles.

Part of a fluid, having more of what it dissolves, will communicate to other parts that have less. Thus very salt water, coming in contact with fresh, communicates its saltness till all is equal, and the sooner if there is a little motion of the water.

Even earth will dissolve, or mix with air. A stroke of a horse's hoof on the ground, in a hot dusty road, will raise a cloud of dust, that shall, if there be a light breeze, expand every way, till perhaps near as big as a common house. It is not by mechanical motion communicated to the particles of dust by the hoof, that they fly so far, not by the wind, that they spread so wide; but the air near the ground, more heated by the hot dust struck into it, is rarefied and rises, and in rising mixes with the cooler air, and communicates of its dust to it, and it is at length so diffused as to become invisible. Quantities of dust are thus carried up in dry seasons: showers wash it from the air, and bring it down again. For water attracting it stronger, it quits the air, and adheres to the water.

Air, suffering continual changes in the degrees of its heat, from various causes and circumstances, and consequently, changes in its specific gravity, must therefore be in continual motion.

A small quantity of fire mixed with water (or degree of heat therein) so weakens the cohesion of its particles, that those on the surface easily quit it, and adhere to the particles of air.

Air moderately heated will support a greater quantity of water invisibly than cold air; for its particles being by heat repelled to a greater distance from each other, thereby more easily keep the particles of water that are annexed to them from running into cohesions that would obstruct, refract, or reflect the light.

Hence when we breathe in warm air, though the same quantity of moisture may be taken up from the lungs, as when we breathe in cold air, yet that moisture is not so visible.

Water being extremely heated, *i. e.* to the degree of boiling, its particles in quitting it so repel each other, as to take up vastly more space than before, and by that repellency support themselves, expelling the air from the space they occupy. That degree of heat being lessened, they again mutually attract, and having no air particles mixed to adhere to, by which they might be supported and kept at a distance, they instantly fall, coalesce, and become water again.

The water commonly diffused in our atmosphere never receives such a degree of heat from the sun, or other cause, as water has when boiling; it is not, therefore, supported by such heat, but by adhering to air.

Water being dissolved in, and adhering to air, that air will not readily take up oil, because of the mutual repellency between water and oil.

Hence cold oils evaporate but slowly, the air having generally a quantity of dissolved water.

Oil being heated extremely, the air that approaches its surface will be also heated extremely; the water then quitting it, it will attract and carry off the oil, which can now adhere to it. Hence the quick evaporation of oil heated to a great degree.

Oil being dissolved in air, the particles to which it adheres will not take up water.

Hence the suffocating nature of air impregnated with burnt grease, as from snuffs of candles and the like. A certain quantity of moisture should be every moment discharged and taken away from the lungs; air that has been frequently breathed, is already overloaded, and, for that reason, can take no more, so will not answer the end. Greasy air refuses to touch it. In both cases suffocation for want of the discharge.

Air will attract and support many other substances.

A particle of air loaded with adhering water, or any other matter, is heavier than before, and would descend.

The atmosphere supposed at rest, a loaded descending particle must act with a force on the particles it passes between, or meets with, sufficient to overcome, in some degree, their mutual repellency, and push them nearer to each other.

Thus, supposing the particles A B C D, and the other near them to be at the distance caused by their mutual repellency (confined by their common gravity) if A would descend to E, it must pass between B and C; when it comes between B and C, it will be nearer to them than before, and must either have pushed them nearer to F and G, contrary to their mutual repellency, or pass through by a force exceeding its repellency with them. It then approaches D, and, to move it out of the way, must act on it with a force sufficient to overcome its repellency with the two next lower particles, by which it is kept in its present situation.

Every particle of air, therefore, will bear any load inferior to the force of these repulsions.

Hence the support of fogs, mists, clouds.

Very warm air, clear, though supporting a very great quantity of moisture, will grow turbid and cloudy on the mixture of colder air, as foggy turbid air will grow clear by warming.

Thus the sun shining on a morning fog, dissipates it; clouds are seen to waste in a sun-shiny day.

But cold condenses and renders visible the vapour: a tankard or decanter filled with cold water will condense the moisture of warm clear air on its outside, where it becomes visible as dew, coalesces into drops, descends in little streams.

The sun heats the air of our atmosphere most near the surface of the earth; for there, besides the direct rays, there are many reflections. Moreover, the earth itself being heated, communicates of its heat to the neighbouring air.

The higher regions, having only the direct rays of the sun passing through them, are comparatively very cold. Hence the cold air on the tops of mountains, and snow on some of them all the year, even in the torrid zone. Hence hail in summer.

If the atmosphere were, all of it (both above and below) always of the same temper as to cold or heat, then the upper air would always be *rarer* than the lower, because the pressure on it is less; consequently lighter, and therefore would keep its place.

But the upper air may be more condensed by cold, than the lower air by pressure; the lower more expanded by heat, than the upper for want of pressure. In such case the upper air will become the heavier, the lower the lighter.

The lower region of air being heated and expanded heaves up, and supports for some time the colder heavier air above, and will conti-

nue to support it while the equilibrium is kept. Thus water is supported in an inverted open glass, while the equilibrium is maintained by the equal pressure upwards of the air below; but the equilibrium by any means breaking, the water descends on the heavier side, and the air rises into its place.

The lifted heavy cold air over a heated country, becoming by any means unequally supported, or unequal in its weight, the heaviest part descends first, and the rest follows impetuously. Hence gusts after heats, and hurricanes in hot climates. Hence the air of gusts and hurricanes is cold, though in hot climates and seasons; it coming from above.

The cold air descending from above, as it penetrates our warm region full of watery particles, condenses them, renders them visible, forms a cloud thick and dark, overcasting sometimes, at once, large and extensive; sometimes, when seen at a distance, small at first, gradually increasing; the cold edge, or surface of the cloud, condensing the vapours next it, which form smaller clouds that join it, increase its bulk, it descends with the wind and its acquired weight, draws nearer the earth, grows denser with continual additions of water, and discharges heavy showers.

Small black clouds thus appearing in a clear sky, in hot climates, portend storms, and warn seamen to hand their sails.

The earth, turning on its axis in about twenty-four hours, the equatorial parts must move about fifteen miles in each minute; in northern and southern latitudes this motion is gradually less to the poles, and there nothing.

If there was a general calm over the face of the globe, it must be by the air's moving in every part as fast as the earth or sea it covers.

He that sails, or rides, has insensibly the same degree of motion as the ship or coach with which he is connected. If the ship strikes the shore, or the coach stops suddenly, the motion continuing in the man, he is thrown forward. If a man were to jump from the land into a swift sailing ship, he would be thrown backward (or towards the stern) not having at first the motion of the ship.

He that travels by sea or land, towards the equinoctial, gradually acquires motion; from it, loses.

But if a man were taken up from latitude 40 (where suppose the earth's surface to move twelve miles per minute) and immediately set down at the equinoctial, without changing the motion he had, his heels would be struck up, he would fall westward. If taken up from the equinoctial, and set down in latitude 40, he would fall eastward.

The air under the equator, and between the tropics, being constantly heated and rarefied by the sun, rises. Its place is supplied by air from northern and southern latitudes, which coming from parts wherein the earth and air had less motion, and not suddenly acquiring the quicker motion of the equatorial earth, appears an east wind blowing westward; the earth moving from west to east, and slipping under the air.*

Thus, when we ride in a calm, it seems a wind against us: if we ride with the wind, and faster, even that will seem a small wind against us.

The air rarefied between the tropics, and rising, must flow in the higher region north and south. Before it rose, it had acquired the greatest motion the earth's rotation could give it. It retains some degree of this motion, and descending in higher latitudes, where the earth's motion is less, will appear a westerly wind, yet tending towards the equatorial parts, to supply the vacancy occasioned by the air of the lower regions flowing thitherwards.

Hence our general cold winds are about north west, our summer cold gusts the same.

The air in sultry weather, though not cloudy, has a kind of haziness in it, which makes objects at a distance appear dull and indistinct. This haziness is occasioned by the great quantity of moisture equally diffused in that air. When, by the cold wind blowing down among it, it is condensed into clouds, and falls in rain, the air becomes purer and clearer. Hence, after gusts, distant objects appear distinct, their figures sharply terminated.

Extreme cold winds congeal the surface of the earth, by carrying off its fire. Warm winds afterwards blowing over that frozen surface will be chilled by it. Could that frozen surface be turned under, and warmer turned up from beneath it, those warm winds would not be chilled so much.

The surface of the earth is also sometimes much heated by the sun: and such heated surface not being changed heats the air that moves over it.

Seas, lakes, and great bodies of water, agitated by the winds, continually change surfaces; the cold surface in winter is turned under by the rolling of the waves, and a warmer turned up; in summer, the warm is turned under, and colder turned up. Hence the more equal temper of sea-water, and the air over it. Hence, in winter, winds from the sea seem warm, winds from the land cold. In summer the contrary.

Therefore the lakes north-west of us,† as they are not so much frozen, nor so apt to

* See a paper on this subject, by the late ingenious Mr. Hadley, in the Philosophical Transactions, wherein this hypothesis for explaining the trade-winds first appeared.

† In Pennsylvania.

freeze as the earth, rather moderate than increase the coldness of our winter winds.

The air over the sea being warmer, and therefore lighter in winter than the air over the frozen land, may be another cause of our general N. W. winds, which blow off to sea at right angles from our North-American coast. The warm light sea air rising, the heavy cold land air pressing into its place.

Heavy fluids descending, frequently form eddies, or whirlpools, as is seen in a funnel, where the water acquires a circular motion, receding every way from a centre, and leaving a vacancy in the middle, greatest above, and lessening downwards, like a speaking trumpet, its big end upwards.

Air descending, or ascending, may form the same kind of eddies, or whirlings, the parts of air acquiring a circular motion, and receding from the middle of the circle by a centrifugal force, and leaving there a vacancy; if descending, greatest above, and lessening downwards; if ascending, greatest below, and lessening upwards; like a speaking trumpet, standing its big end on the ground.

When the air descends with a violence in some places, it may rise with equal violence in others, and form both kinds of whirlwinds.

The air in its whirling motion receding every way from the centre or axis of the trumpet leaves there a *vacuum*, which cannot be filled through the sides, the whirling air, as an arch, preventing; it must then press in at the open ends.

The greatest pressure inwards must be at the lower end, the greatest weight of the surrounding atmosphere being there. The air entering rises within, and carries up dust, leaves, and even heavier bodies that happen in its way, as the eddy, or whirl, passes over land.

If it passes over water, the weight of the surrounding atmosphere forces up the water into the vacuity, part of which, by degrees, joins with the whirling air, and adding weight and receiving accelerated motion, recedes still farther from the centre or axis of the trump, as the pressure lessens; and at last, as the trump widens, is broken into small particles, and so united with air as to be supported by it, and become black clouds at the top of the trump.

Thus these eddies may be whirlwinds at land, water-spouts at sea. A body of water so raised, may be suddenly let fall, when the motion, &c. has not strength to support it, or the whirling arch is broken so as to admit the air: falling in the sea, it is harmless, unless ships happen under it; but if in the progressive motion of the whirl it has moved from the sea, over the land, and then breaks, sudden, violent, and mischievous torrents are the consequences.

Perkins of Boston to Dr. Franklin.

On Water-Spouts.—Read at the Royal Society, June 3, 1756.

Boston, October 16, 1752.

I find by a word or two in your last,* that you are willing to be found fault with; which authorizes me to let you know what I am at a loss about in your papers, which is only in the article of the water-spout. I am in doubt whether water in bulk, or even broken into drops, ever ascends into the region of the clouds *per vorticem*; i. e. whether there be, in reality, what I call a direct water-spout. I make no doubt of direct and inverted whirlwinds; your description of them, and the reason of the thing, are sufficient. I am sensible too, that they are very strong, and often move considerable weights. But I have not met with any historical accounts that seem exact enough to remove my scruples concerning the ascent above said.

Descending spouts (as I take them to be) are many times seen, as I take it, in the calms, between the sea and land trade-winds on the coast of Africa. These contrary winds, or diverging, I can conceive may occasion them, as it were by suction, making a breach in a large cloud. But I imagine they have, at the same time, a tendency to hinder any direct or rising spout, by carrying off the lower part of the atmosphere as fast as it begins to rarefy; and yet spouts are frequent here, which strengthens my opinion, that all of them descend.

But however this be, I cannot conceive a force producible by the rarefication and condensation of our atmosphere, in the circumstances of our globe, capable of carrying water, in large portions, into the region of the clouds. Supposing it to be raised, it would be too heavy to continue the ascent beyond a considerable height, unless parted into small drops; and even then, by its centrifugal force, from the manner of conveyance, it would be flung out of the circle, and fall scattered, like rain.

But I need not expatiate on these matters to you. I have mentioned my objections, and, as truth is my pursuit, shall be glad to be informed. I have seen few accounts of these whirl or eddy winds, and as little of the spouts; and these, especially, lame and poor things to obtain any certainty by. If you know any thing determinate that has been observed, I shall hope to hear from you; as also of any mistake in my thoughts. I have nothing to object to any other part of your

* A Letter on Inoculation, which is transferred to a subsequent part of this volume, that the papers on meteorological subjects may not be interrupted.

suppositions: and as to that of the trade-winds, I believe nobody can.

P. S. The figures in the *Philosophical Transactions* show, by several circumstances, that they all descended, though the relators seemed to think they took up water.*

Dr. Perkins to Dr. Franklin.—Read at the Royal Society, June 24, 1756.

Boston, October 23, 1752.

In the enclosed, you have all I have to say of that matter. It proved longer than I expected, so that I was forced to add a cover to it. I confess it looks like a dispute; but that is quite contrary to my intentions. The sincerity of friendship and esteem were my motives; nor do I doubt your scrupling the goodness of the intention. However, I must confess, I cannot tell exactly how far I was actuated by hopes of better information, in discovering the whole foundation of my opinion, which, indeed, is but an opinion, as I am very much at a loss about the validity of the reasons. I have not been able to differ from you in sentiment concerning any thing else in your *Suppositions*. In the present case I lie open to conviction, and shall be the gainer when informed. If I am right, you will know that, without my adding any more. Too much said on a merely speculative matter, is but a robbery committed on practical knowledge.—Perhaps I am too much pleased with these dry notions: however, by this you will see that I think it unreasonable to give you more trouble about them, than your leisure and inclination may prompt you to.—I am, &c.

Since my last I considered, that, as I had begun with reason of my dissatisfaction about the ascent of water in spouts, you would not be unwilling to hear the whole I have to say, and then you will know what I rely upon.

What occasioned my thinking all spouts descend, is that I found some did certainly do so. A difficulty appeared concerning the ascent of so heavy a body as water, by any force I was apprized of as probably sufficient. And, above all, a view of Mr. Stuart's portraits of spouts, in the *Philosophical Transactions*.

Some observations on these last will include the chief part of my difficulties.

Mr. Stuart has given us the figures of a number observed by him in the Mediterranean; all with some particulars which make for my opinion, if well drawn.

The great spattering, which relators mention in the water where the spout descends, and which appears in all his draughts, I conceive to be occasioned by drops descending very thick and large into the place.

On the place of this spattering, arises the appearance of a bush, into the centre of which the spout comes down. This bush I take to be formed by a spray, made by the force of these drops, which being uncommonly large and descending with unusual force by a stream of wind descending from the cloud with them, increases the height of the spray: which wind being repulsed by the surface of the waters rebounds and spreads; by the first rising the spray higher than it otherwise would go; and by the last making the top of the bush appear to bend outwards (*i. e.*) the cloud of spray is forced off from the trunk of the spout, and falls backward.

The bush does the same where there is no appearance of a spout reaching it; and is depressed in the middle, where the spout is expected. This, I imagine, to be from numerous drops of the spout falling into it, together with the wind I mentioned, by their descent, which beat back the rising spray in the centre.

This circumstance, of the bush bending outwards at the top, seems not to agree with what I call a direct whirlwind, but consistent with the reversed; for a direct one would sweep the bush inwards; if, in that case, any thing of a bush would appear.

The pillar of water, as they call it, from its likeness, I suppose to be only the end of the spout immersed in the bush, a little blackened by the additional cloud, and perhaps, appears to the eye beyond its real bigness, by a refraction in the bush, and which refraction may be the cause of the appearance of separation, betwixt the part in the bush, and that above it. The part in the bush is cylindrical, as it is above (*i. e.*) the bigness the same from the top of the bush to the water. Instead of this shape, in case of a whirlwind, it must have been pyramidical.

Another thing remarkable, is, the curve in some of them: this is easy to conceive, in case of descending parcels of drops through various winds, at least till the cloud condenses so fast as to come down, as it were, *uno rivo*. But it is harder to me to conceive it in the ascent of water, that it should be conveyed along, secure of not leaking or often dropping through the under side, in the prone part: and, should the water be conveyed so swiftly, and with such force, up into the cloud, as to prevent this, it would, by a natural disposition to move on in a present direction, presently straiten the curve, raising the shoulder very swiftly, till lost in the cloud.

Over every one of Stuart's figures, I see a cloud: I suppose his clouds were first, and then the spout; I do not know whether it be so with all spouts, but suppose it is. Now, if whirlwinds carried up the water, I should expect them in fair weather, but not under a cloud; as is observable of whirlwinds; they come in fair weather, not under the shade of

* Two engraved representations of water-spouts, from the Philosophical Transactions, are given in this edition, the better to illustrate the plate on the same subject, by Dr. Franklin.

a cloud, nor in the night: since shade cools the air: but, on the contrary, violent winds often descend from the clouds; strong gusts which occupy small spaces: and from the higher regions, extensive hurricanes, &c.

Another thing is the appearance of the spout *coming from* the cloud. This I cannot account for on the notion of a direct spout, but in the real descending one, it is easy. I take it, that the cloud begins first of all to pour out drops at that particular spot, or *foramen;* and, when that current of drops increases, so as to force down wind and vapour, the spout becomes so far as that goes opaque. I take it, that no clouds drop spouts, but such as make very fast, and happen to condense in a particular spot, which perhaps is coldest, and gives a determination downwards, so as to make a passage through the subjacent atmosphere.

If spouts ascend, it is to carry up the warm rarefied air below, to let down all and any that is colder above; and, if so, they must carry it through the cloud they go into (for that is cold and dense, I imagine) perhaps far into the higher region, making a wonderful appearance at a convenient distance to observe it, by the swift rise of a body of vapour, above the region of the clouds. But as this has never been observed in any age, if it be supposable that is all.

I cannot learn by mariners, that any wind blows towards a spout more than any other way; but it blows towards a whirlwind, for a large distance round.

I suppose there has been no instance of the water of a spout being salt, when coming across any vessel at sea. I suppose too, that there have been no salt rains; these would make the case clear.

I suppose it is from some unhappy effects of these dangerous creatures of nature, that sailors have an universal dread on them, of breaking in their deck, should they come across them.

I imagine spouts, in cold seasons, as Gordon's in the Downs, prove the descent.

Query. Whether there is not always more or less cloud, first, where a spout appears?

Whether they are not, generally, on the borders of trade-winds; and whether this is for, or against me?

Whether there be any credible account of a whirlwind's carrying up all the water in a pool, or small pond: as when shoal, and the banks low, a strong gust might be supposed to blow it all out?

Whether a violent tornado, of a small extent, and other sudden and strong gusts, be not winds from above, descending nearly perpendicular; and, whether many that are called whirlwinds at sea, are any other than these, and so might be called air-spouts, if they were objects of sight?

I overlooked, in its proper place, Stuart's No. 11, which is curious for its inequalities, and, in particular, the approach to breaking, which, if it would not be too tedious, I would have observed a little upon, in my own way, as, I think, this would argue against the ascent, &c. but I must pass it, not only for the reason mentioned, but want of room besides.

As to Mr. Stuart's ocular demonstration of the ascent in his great perpendicular spout, the only one it appears in, I say, as to this, what I have written supposes him mistaken, which, yet, I am far from asserting.

The force of an airy vortex, having less influence on the solid drops of water, than on the interspersed cloudy vapours, makes the last whirl round swifter, though it descend slower: and this might easily deceive, without great care, the most unprejudiced person.

To Dr. Perkins.

Water-spouts and Whirlwinds compared.—Read at the Royal Society, June 24, 1753.

PHILADELPHIA, Feb. 4, 1753.

I OUGHT to have written to you, long since, in answer to yours of October 16, concerning the water-spout; but business partly, and partly a desire of procuring further information by inquiry among my seafaring acquaintance, induced me to postpone writing, from time to time, till I am now almost ashamed to resume the subject, not knowing but you may have forgot what has been said upon it.

Nothing certainly, can be more improving to a searcher into nature, than objections judiciously made to his opinion, taken up, perhaps, too hastily: for such objections oblige him to re-study the point, consider every circumstance carefully, compare facts, make experiments, weigh arguments, and be slow in drawing conclusions. And hence a sure advantage results; for he either confirms a truth, before too slightly supported; or discovers an error, and receives instruction from the objector.

In this view I consider the objections and remarks you sent me, and thank you for them sincerely: but, how much soever my inclinations lead me to philosophical inquiries, I am so engaged in business, public and private, that those more pleasing pursuits are frequently interrupted, and the chain of thought necessary to be closely continued in such disquisitions, is so broken and disjointed, that it is with difficulty I satisfy myself in any of them: and I am now not much nearer a conclusion, in this matter of the spout, than when I first read your letter.

Yet, hoping we may, in time, sift out the

truth between us, I will send you my present thoughts, with some observations on your reasons on the accounts in the *Transactions*, and on other relations I have met with. Perhaps, while I am writing, some new light may strike me, for I shall now be obliged to consider the subject with a little more attention.

I agree with you, that, by means of a vacuum in a whirlwind, water cannot be supposed to rise in large masses to the region of the clouds; for the pressure of the surrounding atmosphere could not force it up in a continued body, or column, to a much greater height, than thirty feet. But if their really is a vacuum in the centre, or near the axis of whirlwinds, then, I think, water may rise in such vacuum to that height, or to a less height, as the vacuum may be less perfect.

I had not read Stuart's account, in the *Transactions*, for many years, before the receipt of your letter, and had quite forgot it; but now, on viewing his draughts, and considering his descriptions, I think they seem to favour *my hypothesis*; for he describes and draws columns of water, of various heights, terminating abruptly at the top, exactly as water would do, when forced up by the pressure of the atmosphere into an exhausted tube.

I must, however, no longer call it *my hypothesis*, since I find Stuart had the same thought, though somewhat obscurely expressed, where he says, "he imagines this phenomenon may be solved by suction (improperly so called) or rather pulsion, as in the application of a cupping glass to the flesh, the air being first voided by the kindled flax."

In my paper, I supposed a whirlwind and a spout to be the same thing, and to proceed from the same cause; the only difference between them being, that the one passes over land, the other over water. I find, also, in the *Transactions*, that M. de la Pryme was of the same opinion; for he there describes two spouts, as he calls them, which were seen at different times, at Hatfield, in Yorkshire, whose appearances in the air were the same with those of the spouts at sea, and effects the same with those of real whirlwinds.

Whirlwinds have generally a progressive, as well as a circular motion; so had what is called the spout, at Topsham, as described in the Philosophical Transactions, which also appears, by its effects described, to have been a real whirlwind. Water-spouts have, also, a progressive motion; this is sometimes greater, and sometimes less; in some violent, in others barely perceivable. The whirlwind at Warrington continued long in Acrement-Close.

Whirlwinds generally arise after calms and great heats: the same is observed of water-spouts, which are, therefore, most frequent in the warm latitudes. The spout that happened in cold weather, in the Downs, described by Mr. Gordon in the *Transactions*, was, for that reason, thought extraordinary; but he remarks withal, that the weather, though cold when the spout appeared, was soon after much colder: as we find it, commonly, less warm after a whirlwind.

You agree, that the wind blows every way towards a whirlwind, from a large space round. An intelligent whale-man of Nantucket, informed me that three of their vessels, which were out in search of whales, happening to be becalmed, lay in sight of each other, at about a league distance, if I remember right, nearly forming a triangle: after some time, a water-spout appeared near the middle of the triangle, when a brisk breeze of wind sprung up, and every vessel made sail; and then it appeared to them all, by the setting of the sails, and the course each vessel stood, that the spout was to the leeward of every one of them; and they all declared it to have been so, when they happened afterwards in company, and came to confer about it. So that in this particular likewise, whirlwinds and water-spouts agree.

But, if that which appears a water-spout at sea, does sometimes, in its progressive motion, meet with and pass over land, and there produce all the phenomena and effects of a whirlwind, it should thence seem still more evident, that a whirlwind and a spout are the same. I send you, herewith, a letter from an ingenious physician of my acquaintance, which gives one instance of this, that fell within his observation.

A fluid, moving from all points horizontally, towards a centre, must, at that centre, either ascend or descend. Water being in a tub, if a hole be opened in the middle of the bottom, will flow from all sides to the centre, and there descend in a whirl. But, air flowing on and near the surface of land or water, from all sides, towards a centre, must at that centre ascend; the land or water hindering its descent.

If these concentring currents of air be in the upper region, they may, indeed, descend in the spout or whirlwind; but then, when the united current reached the earth or water, it would spread, and, probably, blow every way from the centre. There may be whirlwinds of both kinds, but from the commonly observed effects, I suspect the rising one to be the most common: when the upper air descends, it is, perhaps, in a greater body, extending wider, as in our thunder-gusts, and without much whirling; and, when air descends in a spout, or whirlwind, I should rather expect it would press the roof of a house *inwards*, or force *in* the tiles, shingles, or thatch, force a boat down into the water, or a piece of timber into the earth, than that it would lift them up, and carry them away.

It has so happened, that I have not met with any accounts of spouts, that certainly descended; I suspect they are not frequent. Please to communicate those you mention. The apparent dropping of a pipe from the clouds towards the earth or sea, I will endeavour to explain hereafter.

The augmentation of the cloud, which, as I am informed, is generally, if not always the case, during a spout, seems to show an ascent, rather than a descent of the matter of which such cloud is composed; for a descending spout, one would expect, should diminish a cloud. I own, however, that cold air descending, may, by condensing the vapours in a lower region, form and increase clouds; which, I think, is generally the case in our common thunder-gusts, and, therefore, do not lay great stress on this argument.

Whirlwinds and spouts, are not always, though most commonly, in the day time. The terrible whirlwind, which damaged a great part of Rome, June 11, 1749, happened in the night of that day. The same was supposed to have been first a spout, for it is said to be beyond doubt, that it gathered in the neighbouring sea, as it could be tracked from Ostia to Rome. I find this is in Père Boschovich's account of it, as abridged in the Monthly Review for December, 1750.

In that account, the whirlwind is said to have appeared as a very black, long, and lofty cloud, discoverable, notwithstanding the darkness of the night, by its continually lightning or emitting flashes on all sides, pushing along with a surprising swiftness, and within three or four feet of the ground. Its general effects on houses, were stripping off the roofs, blowing away chimneys, breaking doors and windows, *forcing up the floors, and unpaving the rooms* (some of these effects seem to agree well with a supposed vacuum in the centre of the whirlwind) and the very rafters of the houses were broken and dispersed, and even hurled against houses at a considerable distance, &c.

It seems, by an expression of Père Boschovich's, as if the wind blew from all sides towards the whirlwind; for, having carefully observed its effects, he concludes of all whirlwinds, "that their motion is circular, and their action attractive."

He observes, on a number of histories of whirlwinds, &c. "that a common effect of them is, to carry up into the air, tiles, stones, and animals themselves, which happen to be in their course, and all kinds of bodies unexceptionably, throwing them to a considerable distance, with great impetuosity."

Such effects seem to show a rising current of air.

I will endeavour to explain my conceptions of this matter by figures, representing a plan and an elevation of a spout or whirlwind.

I would only first beg to be allowed two or three positions, mentioned in my former paper.

1. That the lower region of air is often more heated, and so more rarefied, than the upper; consequently, specifically lighter. The coldness of the upper region is manifested by the hail which sometimes falls from it in a hot day.

2. That heated air may be very moist, and yet the moisture so equally diffused and rarefied, as not to be visible, till colder air mixes with it, when it condenses, and becomes visible. Thus our breath, invisible in summer, becomes visible in winter.

Now let us suppose a tract of land, or sea, of perhaps sixty miles square, unscreened by clouds, and unfanned by winds, during great part of a summer's day, or, it may be, for several days successively, till it is violently heated, together with the lower region of air in contact with it, so that the said lower air becomes specifically lighter than the superincumbent higher region of the atmosphere, in which the clouds commonly float: let us suppose, also, that the air surrounding this tract has not been so much heated during those days, and therefore remains heavier. The consequence of this should be, as I conceive, that the heated lighter air, being pressed on all sides, must ascend, and the heavier descend; and, as this rising cannot be in all parts, or the whole area of the tract at once, for that would leave too extensive a vacuum, the rising will begin precisely in that column that happens to be the lightest, or most rarefied; and the warm air will flow horizontally from all points to this column, where the several currents meeting, and joining to rise, a whirl is naturally formed, in the same manner as a whirl is formed in the tub of water, by the descending fluid flowing from all sides of the tub, to the hole in the centre.

And, as the several currents arrive at this central rising column, with a considerable degree of horizontal motion, they cannot suddenly change it to a vertical motion; therefore as they gradually, in approaching the whirl, decline from right curved or circular lines, so, having joined the whirl, they *ascend* by a spiral motion, in the same manner as the water *descends* spirally through the hole in the tub before-mentioned.

Lastly, as the lower air, and nearest the surface, is most rarefied by the heat of the sun, that air is most acted on by the pressure of the surrounding cold and heavy air, which is to take its place; consequently, its motion towards the whirl is swiftest, and so the force of the lower part of the whirl, or trump, strongest, and the centrifugal force of its particles greatest; and hence the vacuum round the axis of the whirl should be greatest near the earth or sea, and be gradually diminished as it approaches the region of the clouds, till

it ends in a point, as at P, *Fig.* II. *in the plate*, forming a long and sharp cone.

In Fig. I. which is a plan or ground-plat of a whirlwind, the circle V. represents the central vacuum.

Between *a a a a* and *b b b b* I suppose a body of air, condensed strongly by the pressure of the currents moving towards it, from all sides without, and by its centrifugal force from within, moving round with prodigious swiftness, (having, as it were, the entire momenta of all the currents ——→ ——→ united in itself) and with a power equal to its swiftness and density.

It is this whirling body of air between *a a a a* and *b b b b* that rises spirally; by its force it tears buildings to pieces, twists up great trees by the roots, &c. and, by its spiral motion, raises the fragments so high, till the pressure of the surrounding and approaching currents diminishing, can no longer confine them to the circle, or their own centrifugal force increasing, grows too strong for such pressure, when they fly off in tangent lines, as stones out of a sling, and fall on all sides, and at great distances.

If it happens at sea, the water under and between *a a a a* and *b b b b* will be violently agitated and driven about, and parts of it raised with the spiral current, and thrown about so as to form a bush-like appearance.

This circle is of various diameters, sometimes very lage. If the vacuum passes over water, the water may rise in it in a body, or column, to near the height of thirty-two feet. If it passes over houses, it may burst their windows or walls outwards, pluck off the roofs, and pluck up the floors, by the sudden rarefaction of the air contained within such buildings; the outward pressure of the atmosphere being suddenly taken off; so the stopped bottle of air bursts under the exhausted receiver of the air pump.

Fig. II. is to represent the elevation of a water-spout, wherein I suppose P P P to be the cone, at first a vacuum, till W W, the rising column of water, has filled so much of it. S S S S, the spiral whirl of air, surrounding the vacuum, and continued higher in a close column after the vacuum ends in the point P, till it reaches the cool region of the air. B B, the bush described by Stuart, surrounding the foot of the column of water.

Now, I suppose this whirl of air will, at first be as invisible as the air itself, though reaching, in reality, from the water, to the region of cool air, in which our low summer thunder-clouds commonly float: but presently it will become visible at its extremities. *At its lower end*, by the agitation of the water, under the whirling part of the circle, between P and S forming Stuart's bush, and by the swelling and rising of the water, in the beginning vacuum, which is, at first, a small, low, broad cone, whose top gradually rises and sharpens, as the force of the whirl increases. *At its upper end* it becomes visible, by the warm air brought up to the cooler region, where its moisture begins to be condensed into thick vapour, by the cold, and is seen first at A, the highest part, which being now cooled, condenses what rises next at B, which condenses that at C, and that condenses what is rising at D, the cold operating by the contact of the vapours faster in a right line downwards than the vapours can climb in a spiral line upwards; they climb, however, and as by continual addition they grow denser, and, consequently, their centrifugal force greater, and being risen above the concentrating currents that compose the whirl, fly off, spread, and form a cloud.

It seems easy to conceive, how, by this successive condensation from above, the spout appears to drop or descend from the cloud, though the materials of which it is composed are all the while ascending.

The condensation of the moisture, contained in so great a quantity of warm air as may be supposed to rise in a short time in this prodigiously rapid whirl, is perhaps, sufficient to form a great extent of cloud, though the spout should be over land, as those at Hatfield; and if the land happens not to be very dusty, perhaps the lower part of the spout will scarce become visible at all; though the upper, or what is commonly called the descending part be very distinctly seen.

The same may happen at sea, in case the whirl is not violent enough to make a high vacuum, and raise the column, &c. In such case, the upper part A, B, C, D only will be visible, and the bush, perhaps, below.

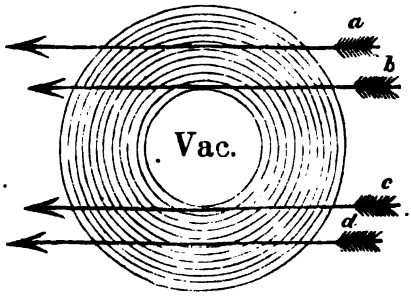
But if the whirl be strong, and there be much dust on the land, and the column W W be raised from the water, then the lower part becomes visible, and sometimes even united to the upper part. For the dust may be carried up in the spiral whirl, till it reach the region where the vapour is condensed, and rise with that even to the clouds: and the friction of the whirling air, on the sides of the column W W, may detach great quantities of its water, break it into drops, and carry them up in the spiral whirl mixed with the air; the heavier drops may, indeed, fly off, and fall, in a shower, round the spout; but much of it will be broken into vapour, yet visible; and thus, in both cases, by dust at land, and by water at sea, the whole tube may be darkened and rendered visible.

As the whirl weakens, the tube may (in appearance) separate in the middle; the column of water subsiding, and the superior condensed part drawing up to the cloud. Yet still the tube, or whirl of air, may remain entire, the middle only becoming invisible, as not containing visible matter.

Dr. Stuart says, "It was observable of all the spouts he saw, but more perceptible of the great one; that, towards the end, it began to appear like a hollow canal, only black in the borders, but white in the middle; and though at first it was altogether black and opaque, yet, now, one could very distinctly perceive the sea water to fly up along the middle of this canal, as smoke up a chimney."

And Dr. Mather, describing a whirlwind, says, "a thick dark small cloud arose, with a pillar of light in it, of about eight or ten feet diameter, and passed along the ground in a tract not wider than a street, horribly tearing up trees by the roots, blowing them up in the air like feathers, and throwing up stones of great weight to a considerable height in the air, &c."

These accounts, the one of water-spouts, the other of a whirlwind, seem, in this particular, to agree; what one gentleman describes as a tube, black in the borders, and white in the middle, the other calls a black cloud, with a pillar of light in it; the latter expression has only a little more of the *marvellous*, but the thing is the same; and it seems not very difficult to understand. When Dr. Stuart's spouts were full charged, that is when the whirling pipe of air was filled between *a a a a* and *b b b b*, Fig. I. with quantities of drops, and vapour torn off from the column W W Fig. II, the whole was rendered



so dark, as that it could not be seen through, nor the spiral ascending motion discovered; but when the quantity ascending lessened, the pipe became more transparent, and the ascending motion visible. For by inspection of the figure given in this page, representing a section of our spout, with the vacuum in the middle, it is plain that if we look at such a hollow pipe in the direction of the arrows, and suppose opaque particles to be equally mixed in the space between the two circular lines, both the part between the arrows *a* and *b*, and that between the arrows *c* and *d*, will appear much darker than that between *b* and *c*, as there must be many more of those opaque particles in the line of vision across the sides, than across the middle. It is thus that a hair in a microscope evidently appears to be a pipe, the sides showing darker than the middle. Dr. Mather's whirl was probably filled with dust, the sides were very dark, but the vacuum within rendering the middle more transparent, he calls it a pillar of light.

It was in this more transparent part, between *b* and *c*, that Stuart could see the spiral motion of the vapours, whose lines on the nearest and farthest side of the transparent part crossing each other, represented smoke ascending in a chimney; for the quantity being still too great in the line of sight through the sides of the tube, the motion could not be discovered there, and so they represented the solid sides of the chimney.

When the vapours reach in the pipe from the clouds near to the earth, it is no wonder now to those who understand electricity, that flashes of lightning should descend by the spout, as in that of Rome.

But you object, if water may be thus carried into the clouds, why have we not salt rains? The objection is strong and reasonable, and I know not whether I can answer it to your satisfaction. I never heard but of one salt rain, and that was where a spout passed pretty near a ship, so I suppose it to be only the drops thrown off from the spout, by the centrifugal force (as the birds were at Hatfield) when they had been carried so high as to be above, or to be too strongly centrifugal, for the pressure of the concurring winds surrounding it: and, indeed, I believe there can be no other kind of salt rain; for it has pleased the goodness of God so to order it, that the particles of air will not attract the particles of salt, though they strongly attract water.

Hence, though all metals, even gold, may be united with air, and rendered volatile, salt remains fixt in the fire, and no heat can force it up to any considerable height, or oblige the air to hold it. Hence, when salt rises, as it will a little way, into air with water, there is instantly a separation made; the particles of water adhere to the air, and the particles of salt fall down again, as if repelled and forced off from the water by some power in the air; or, as some metals, dissolved in a proper *menstruum*, will quit the solvent when other matter approaches, and adhere to that, so the water quits the salt, and embraces the air; but air will not embrace the salt, and quit the water, otherwise our rains would indeed be salt, and every tree and plant on the face of the earth be destroyed, with all the animals that depend on them for subsistence——He who hath proportioned and given proper qualities to all things, was not unmindful of this. Let us adore HIM with praise and thanksgiving.

By some accounts of seamen, it seems the column of water W W, sometimes falls suddenly; and if it be, as some say, fifteen or twenty yards diameter, it must fall with great

force, and they may well fear for their ships. By one account, in the *Transactions*, of a spout that fell at Colne, in Lancashire, one would think the column is sometimes lifted off from the water, and carried over land, and there let fall in a body; but this, I suppose, happens rarely.

Stuart describes his spouts as appearing no bigger than a mast, and sometimes less; but they were seen at a league and a half distance.

I think I formerly read in Dampier, or some other voyager, that a spout, in its progressive motion, went over a ship becalmed, on the coast of Guinea, and first threw her down on one side, carrying away her foremast, then suddenly whipped her up, and threw her down on the other side, carrying away her mizen-mast, and the whole was over in an instant. I suppose the first mischief was done by the fore-side of the whirl, the latter by the hinder-side, their motion being contrary.

I suppose a whirlwind, or spout, may be stationary, when the concurring winds are equal; but if unequal, the whirl acquires a progressive motion, in the direction of the strongest pressure.

When the wind that gives the progressive motion becomes stronger below than above, or above than below, the spout will be bent, and, the cause ceasing, straiten again.

Your queries, towards the end of your paper, appear judicious, and worth considering. At present I am not furnished with facts sufficient to make any pertinent answer to them; and this paper has already a sufficient quantity of conjecture.

Your manner of accommodating the accounts to your hypothesis of descending spouts is, I own, ingenious, and perhaps that hypothesis may be true. I will consider it farther, but, as yet, I am not satisfied with it, though hereafter I may be.

Here you have my method of accounting for the principal phenomena, which I submit to your candid examination.

And as I now seem to have almost written a book, instead of a letter, you will think it high time I should conclude; which I beg leave to do, with assuring you that I am, &c.

B. FRANKLIN.

Dr. Mercer to Dr. Franklin.

Description of a Water-spout at Antigua.—Read at the Royal Society, June 24, 1756.

NEW-BRUNSWICK, November 11, 1752.

I AM favoured with your letter of the 2d instant, and shall, with pleasure, comply with your request, in describing (as well as my memory serves me) the water-spout I saw at Antigua; and shall think this, or any other service I can do, well repaid, if it contributes to your satisfaction in so curious a disquisition.

I had often seen water-spouts at a distance, and heard many strange stories of them, but never knew any thing satisfactory of their nature or cause, until that which I saw at Antigua; which convinced me that a water-spout is a whirlwind, which becomes visible in all its dimensions by the water it carries up with it.

There appeared not far from the mouth of the harbour of St. John's, two or three water-spouts, one of which took its course up the harbour. Its progressive motion was slow and unequal, not in a strait line, but, as it were, by jerks or starts. When just by the wharf, I stood about one hundred yards from it. There appeared in the water a circle of about twenty yards diameter, which, to me, had a dreadful, though pleasing appearance. The water in this circle was violently agitated, being whisked about, and carried up into the air with great rapidity and noise, and reflected a lustre, as if the sun shined bright on that spot, which was more conspicuous, as there appeared a dark circle around it. When it made the shore, it carried up with the same violence shingles, staves,* large pieces of the roofs of houses, &c. and one small wooden house it lifted entire from the foundation on which it stood, and carried it to the distance of fourteen feet, where it settled without breaking or oversetting; and, what is remarkable, though the whirlwind moved from west to east, the house moved from east to west.—Two or three negroes and a white woman, were killed by the fall of timber, which it carried up into the air and dropped again. After passing through the town, I believe it was soon dissipated; for, except tearing a large limb from a tree, and part of the cover of a sugar work near the town, I do not remember any further damage done by it. I conclude, wishing you success in your inquiry.

W. MERCER.

Dr. Perkins to Dr. Franklin.

Shooting Stars.—Read at the Royal Society, July 8, 1756.

BOSTON, May 14, 1753.

I RECEIVED your letter of April last, and thank you for it. Several things in it make make me at a loss which side the truth lies on, and determine me to wait for farther evidence.

As to shooting-stars, as they are called, I know very little, and hardly know what to say. I imagine them to be passes of electric fire from place to place in the atmosphere, perhaps occasioned by accidental pressures of a non-electric circumambient fluid, and so by

* I suppose shingles, staves, timber, and other lumber might be lying in quantities on the wharf, for sale, as brought from the northern colonies.—B. F.

propulsion, or elicited by the circumstance of a distant quantity *minus* electrified, which it shoots to supply, and becomes apparent by its contracted passage through a non-electric medium. Electric fire in our globe is always in action, sometimes ascending, descending, or passing from region to region. I suppose it avoids too dry air, and therefore we never see these shoots ascend. It always has freedom enough to pass down unobserved, but, I imagine, not always so, to pass to distant climes and meridians less stored with it.

The shoots are sometimes all one way, which, in the last case, they should be.

Possibly there may be collections of particles in our atmosphere, which gradually form, by attraction, either similar ones *per se*, or dissimilar particles, by the intervention of others. But then, whether they shoot or explode of themselves, or by the approach of some suitable foreign collection, accidentally brought near by the usual commotions and interchanges of our atmosphere, especially when the higher and lower regions intermix, before change of winds and weather, I leave.

I believe I have now said enough of what I know nothing about. If it should serve for your amusement, or any way oblige you, it is all I aim at, and shall, at your desire, be always ready to say what I think, as I am sure of your candour.

Dr. Perkins to Dr. Franklin.

Water-spouts and Whirlwinds.—Read at the Royal Society, July 8, 1756.

Spouts have been generally believed ascents of water from below, to the region of the clouds, and whirlwinds, the means of conveyance. The world has been very well satisfied with these opinions, and prejudiced with respect to any observations about them. Men of learning and capacity have had many opportunities in passing those regions where these phenomena were most frequent, but seem industriously to have declined any notice of them, unless to escape danger, as a matter of mere impertinence in a case so clear and certain as their nature and manner of operation are taken to be. Hence it is has been very difficult to get any tolerable accounts of them. None but those they fell near can inform us any thing to be depended on; three or four such instances follow, where the vessels were so near, that their crews could not avoid knowing something remarkable with respect to the matters in question.

Captain John Wakefield, junior, passing the Straits of Gibraltar, had one fall by the side of his ship; it came down of a sudden, as they think, and all agree the descent was certain.

Captain Langstaff, on a voyage to the West Indies, had one come across the stern of his vessel, and passed away from him. The water came down in such quantity that the present capt. Melling, who was then a common sailor at the helm, says it almost drowned him, running into his mouth, nose, ears, &c. and adds, that it tasted perfectly fresh.

One passed by the side of captain Howland's ship, so near that it appeared pretty plain that the water descended from first to last.

Mr. Robert Spring was so near one in the Straits of Malacca, that he could perceive it to be a small very thick rain.

All these assure me, that there was no wind drawing towards them, nor have I found any others that have observed such a wind.

It seems plain, by these few instances, that whirlwinds do not always attend spouts; and that the water really descends in some of them. But the following consideration, in confirmation of this opinion, may, perhaps, render it probable that all the spouts are descents.

It seems unlikely that there should be two sorts of spouts, one ascending and the other descending.

It has not yet been proved that any one spout ever ascended. A specious appearance is all that can be produced in favour of this; and those who have been most positive about it, were at more than a league's distance when they observed, as Stuart and others, if I am not mistaken. However, I believe it impossible to be certain whether water ascends or descend at half the distance.

It may not be amiss to consider the places where they happen most. These are such as are liable to calms from departing winds on both sides, as on the borders of the equinoctial trade winds, calms on the coast of Guinea, in the Straits of Malacca, &c. places where the under region of the atmosphere is drawn off horizontally. I think they do not come where the calms are without departing winds; and I take the reason to be, that such place and places where winds blow towards one another, are liable to whirlwinds, or other ascents of the lower region, which I suppose contrary to spouts. But the former are liable to descents, which I take to be necessary to their production. Agreeable to this, it seems reasonable to believe, that any Mediterranean sea should be more subject to spouts than others. The sea usually so called is so. The Straits of Malacca is. Some large gulphs may probably be so, in suitable latitudes; so the Red Sea, &c. and all for this reason, that the heated lands on each side draw off the under region of the air, and make the upper descend, whence sudden and wonderful condensations may take place, and make these descents.

It seems to me, that the manner of their ap-

pearance and procedure, favour the notion of a descent.

More or less of a cloud, as I am imformed, always appears over the place first; then a spattering on the surface of the water below; and when this is advanced to a considerable degree, the spout emerges from the cloud, and descends, and that, if the causes are sufficient, down to the places of spattering, with a roaring in proportion to the quantity of the discharge; then it abates, or stops, sometimes more gradually, sometimes more suddenly.

I must observe a few things on these particulars, to show how I think they agree with my hypothesis.

The preceding cloud over the place shows condensation, and, consequently, tendency downwards, which therefore must naturally prevent any ascent. Besides that, so far as I can learn, a whirlwind never comes under a cloud, but in a clear sky.

The spattering may be easily conceived to be caused by a stream of drops, falling with great force on the place, imagining the spout to begin so, when a sudden and great condensation happens in a contracted space, as the Ox-Eye on the coast of Guinea.

The spout appearing to descend from the cloud seems to be, by the stream of nearly contiguous drops bringing the air into consent, so as to carry down a quantity of the vapour of the cloud; and the pointed appearance it makes may be from the descending course being swiftest in the middle, or centre of the spout: this naturally drawing the outer parts inward, and the centre to a point; and that will appear foremost that moves swiftest. The phenomenon of retiring and advancing, I think may be accounted for, by supposing the progressive motion to exceed or not equal the consumption of the vapour by condensation. Or more plainly thus: the descending vapour which forms the apparent spout, if it be slow in its progress downwards, is condensed as fast as it advances, and so appears at a stand; when it is condensed faster than it advances, it appears to retire; and *vice versa*.

Its duration, and manner of ending, are as the causes, and may vary by several accidents.

The cloud itself may be so circumstanced as to stop it; as when, extending wide, it weighs down at a distance round about, while a small circle at the spout being exonerated by the discharge, ascends and shuts up the passage. A new determination of wind may, perhaps, stop it too. Places liable to these appearances are very liable to frequent and sudden alterations of it.

Such accidents as a clap of thunder, firing cannon, &c. may stop them, and the reason may be, that any shock of this kind may occasion the particles that are near cohering, immediately to do so; and then the whole, thus condensed falls at once (which is what I suppose is vulgarly called the breaking of the spout) and in the interval, between this period and that of the next set of particles being ready to unite, the spout shuts up. So that if this reasoning is just, these phenomena agree with my hypothesis.

The usual temper of the air, at the time of their appearance, if I have a right information, is for me too; it being then pretty cool for the season and climate; and this is worth remark, because cool air is weighty, and will not ascend; besides, when the air grows cool, it shows that the upper region descends, and conveys this temper down; and when the tempers are equal, no whirlwind can take place. But spouts have been known, when the lower region has been really cold. Gordon's spout in the Downs is an instance of this—(*vide Philosophical Transactions*)—where the upper region was probably not at all cooler, if so cold as the lower: it was a cold day in the month of March, hail followed, but not snow, and it is observable, that not so much as hail follows or accompanies them in moderate seasons or climes, when and where they are most frequent. However, it is not improbable, that just about the place of descent may be cooler than the neighbouring parts, and so favour the wonderful celerity of condensation. But, after all, should we allow the under region to be ever so much the hottest, and a whirlwind to take place in it: suppose then the sea-water to ascend, it would certainly cool the spout, and then, query, whether it would not very much, if not wholly, obstruct its progress.

It commonly rains when spouts disappear, if it did not before, which it frequently does not, by the best accounts I have had; but the cloud increases much faster after they disappear, and it soon rains. The first shows the spout to be a contracted rain, instead of the diffused one that follows; and the latter that the cloud was not formed by ascending water, for then it would have ceased growing when the spout vanished.

However, it seems that spouts have sometimes appeared after it began to rain; but this is one way a proof of my hypothesis, viz. as whirlwinds do not come under a cloud.

I forgot to mention, that the increase of cloud, while the spout subsists, is no argument of an ascent of water, by the spout. Since thunder-clouds sometimes increase greatly while it rains very hard.

Divers effects of spouts seem not so well accounted for any other way as by descent.

The bush round the feet of them seems to be a great spray of water made by the violence of descent, like that in great falls of water from high precipices.

The great roar, like some vast inland falls, is so different from the roar of whirlwinds, by all accounts, as to be no ways compatible.

The throwing things from it with great force, instead of carrying them up into the air, is another difference.

There seems some probabilty that the sailors' traditionary belief, that spouts may break in their decks, and so destroy vessels, might originate from some facts of that sort in former times. This danger is apparent on my hypothesis, but it seems not so on the other: and my reason for it is, that the whole column of a spout from the sea to the clouds cannot, in a natural way, even upon the largest supposition, support more than about three feet water, and from truly supposable causes, not above one foot, as may appear more plainly by and bye. Supposing now the largest of these quantities to rise, it must be disseminated into drops, from the surface of the sea to the region of the clouds, or higher; for this reason it is quite unlikely to be collected into masses, or a body, upon its falling; but would descend in progression according to the several degrees of altitude the different portions had arrived at when it received this new determination.

Now that there cannot more rise upon the common hypothesis than I have mentioned, may appear probable, if we attend to the only efficient cause in supposed ascending spouts, viz. whirlwinds.

We know, that the rarefaction of the lower, and the condensation of the upper region of air, are the only natural causes of whirlwinds. Let us then suppose the former as hot as their greatest summer heat in England, and the latter as cold as the extent of their winter. These extremes have been found there to alter the weight of the air one tenth, which is equal to a little more than three feet water. Were this case possible, and a whirlwind take place in it, it might act with a force equal to the mentioned difference. But as this is the whole strength, so much water could not rise; therefore to allow it due motion upwards, we must abate, at least, one fourth part, perhaps more, to give it such a swift ascension as some think usual. But here several difficulties occur, at least they are so to me. As, whether this quantity would render the spout opaque? since it is plain that in drops it could not do so. How, or by what means it may be reduced small enough? or, if the water be not reduced into vapour, what will suspend it in the region of the clouds when exonerated there; and, if vapourized while ascending, how can it be dangerous by what they call the breaking? For it is difficult to conceive how a condensatize power should instantaneously take place of a rarefying and disseminating one.

The sudden fall of the spout, or rather, the sudden ceasing of it, I accounted for, in my way, before. But it seems necessary to mention something I then forgot. Should it be said to do so (*i. e.*) to fall, because all the lower rarefied air is ascended, whence the whirlwind must cease, and its burden drop; I cannot agree to this, unless the air be observed on a sudden to have grown much colder, which I cannot learn has been the case. Or should it be supposed that the spout was, on a sudden, obstructed at the top, and this the cause of the fall, however plausible this might appear, yet no more water would fall than what was at the same time contained in the column, which is often, by many and satisfactory accounts to me, again far from being the case.

We are, I think, sufficiently assured, that not only tons, but scores or hundreds of tons descend in one spout. Scores of tons more than can be contained in the trunk of it, should we suppose water to ascend.

But, after all, it does not appear that the above-mentioned different degrees of heat and cold concur in any region where spouts usually happen, nor, indeed, in any other.

***Observations on the Meteorological Paper; by a Gentleman in Connecticut.*—Read at the Royal Society, Nov. 4, 1756.**

"AIR and water mutually attract each other, (saith Mr. F.) hence water will dissolve in air, as salt in water." I think that he hath demonstrated, that the supporting of salt in water is not owing to its superfices being increased, because "the specific gravity of salt is not altered by dividing of it, any more than that of lead, sixteen bullets of which, of an ounce each, weigh as much in water as one of a pound." But yet, when this came to be applied to the supporting of water in air, I found an objection rising in my mind.

In the first place, I have always been loth to seek for any new hypothesis, or particular law of nature, to account for any thing that may be accounted for from the known general, and universal law of nature; it being an argument of the infinite wisdom of the Author of the world, to effect so many things by one general law. Now I had thought that the rising and support of water, in air, might be accounted for from the general law of gravitation, by only supposing the spaces occupied by the same quantity of water increased.

And, with respect to the lead, I queried thus in my own mind: whether if the superfices of a bullet of lead should be increased four or five fold by an internal vacuity, it would weigh the same in water as before. I mean, if a pound of lead should be formed into a hollow globe, empty within, whose superfices should be four or five times as big as that of the same lead when a solid lump, it would weigh as much in water as before. I supposed it would not. If this concavity was filled with water, perhaps it might; if

with air, it would weigh at least as much less, as this difference between the weight of that included air, and that of water.

Now although this would do nothing to account for the dissolution of salt in water, the smallest lumps of salt being no more hollow spheres, or any thing of the like nature, than the greatest; yet, perhaps, it might account for water's rising and being supported in air. For you know that such hollow globules, or bubbles, abound upon the surface of the water, which even by the breath of our mouths, we can cause to quit the water, and rise in the air.

These bubbles I used to suppose to be the coats of water, containing within them air rarefied and expanded with fire, and that therefore, the more friction and dashing there is upon the surface of the waters, and the more heat and fire, the more they abound.

And I used to think, that although water be specifically heavier than air, yet such a bubble, filled only with fire and very rarefied air, may be lighter than a quantity of common air, of the same cubical dimensions, and, therefore, ascend; for the rarefied air enclosed, may more fall short of the same bulk of common air, in weight, than the watery coat exceeds a like bulk of common air in gravity.

This was the objection in my mind, though, I must confess, I know not how to account for the watery coat's encompassing the air, as above-mentioned, without allowing the attraction between air and water, which the gentleman supposes: so that I do not know but that this objection, examined by that sagacious genius, will be an additional confirmation of the hypothesis.

The gentleman observes, "that a certain quantity of moisture should be every moment discharged and taken away from the lungs; and hence accounts for the suffocating nature of snuffs of candles, as impregnating the air with grease, between which and water there is a natural repellency; and of air that hath been frequently breathed in, which is overloaded with water, and, for that reason, can take no more air. Perhaps the same observation will account for the suffocating nature of damps in wells.

But then if the air can support and take off but such a proportion of water, and it is necessary that water be so taken off from the lungs, I queried with myself how it is we can breathe in an air full of vapours, so full as that they continually precipitated. Do not we see the air overloaded, and casting forth water plentifully, when there is no suffocation?

The gentleman again observes, "That the air under the equator, and between the tropics, being constantly heated and rarefied by the sun, rises; its place is supplied by air from northern and southern latitudes, which, coming from parts where the air and earth had less motion, and not suddenly acquiring the quicker motion of the equatorial earth, appears an east wind blowing westward; the earth moving from west to east, and slipping under the air."

In reading this, two objections occurred to my mind:—First, that it is said, the trade-wind doth not blow in the forenoon, but only in the afternoon.

Secondly, that either the motion of the northern and southern air towards the equator is so slow, as to acquire almost the same motion as the equatorial air when it arrives there, so that there will be no sensible difference; or else the motion of the northern and southern air towards the equator, is quicker, and must be sensible; and then the trade-wind must appear either as a south-east or north-east wind: south of the equator, a south-east wind; north of the equator, a north-east. For the apparent wind must be compounded of this motion from north to south, or *vice versa*; and of the difference between its motion from west to east, and that of the equatorial air.

Observations in answer to the foregoing.—Read at the Royal Society, Nov. 4, 1756.

1st. The supposing a mutual attraction between the particles of water and air, is not introducing a new law of nature; such attractions taking place in many other known instances.

2dly. Water is specifically 850 times heavier than air. To render a bubble of water, then, specifically lighter than air, it seems to me that it must take up more than 850 times the space it did before it formed the bubble; and within the bubble should be either a vacuum or air rarefied more than 850 times. If a vacuum, would not the bubble be immediately crushed by the weight of the atmosphere? And no heat, we know of, will rarefy air any thing near so much; much less the common heat of the sun, or that of friction by the dashing on the surface of the water: besides, water agitated ever so violently produces no heat, as has been found by accurate experiments.

3dly. A hollow sphere of lead has a firmness and consistency in it, that a hollow sphere or bubble of fluid unfrozen water cannot be supposed to have. The lead may support the pressure of the water it is immerged in, but the bubble could not support the pressure of the air, if empty within.

4thly. Was ever a visible bubble seen to rise in air? I have made many, when a boy, with soap-suds and a tobacco-pipe; but they all descended when loose from the pipe, though slowly, the air impeding their motion: they may, indeed, be forced up by a wind from below, but do not rise, of themselves, though filled with warm breath.

5thly. The objection relating to our breathing moist air seems weighty, and must be farther considered. The air that has been breathed has, doubtless, acquired an addition of the perspirable matter which nature intends to free the body from, and which would be pernicious if retained and returned into the blood: such air then may become unfit for respiration, as well for that reason, as on account of its moisture. Yet I should be glad to learn, by some accurate experiment, whether a draft of air, two or three times inspired, and expired, perhaps in a bladder, has, or has not, acquired more moisture than our common air in the dampest weather. As to the precipitation of water in the air we breathe, perhaps it is not always a mark of that air's being overloaded. In the region of the clouds, indeed, the air must be overloaded if it lets fall its water in drops, which we call rain; but those drops may fall through a drier air near the earth; and accordingly we find that the hygroscope sometimes shows a less degree of moisture, during a shower, than at other times when it does not rain at all. The dewy dampness, that settles on the insides of our walls and wainscots, seems more certainly to denote an air overloaded with moisture; and yet this is no sure sign: for, after a long continued cold season, if the air grows suddenly warm, the walls, &c. continuing longer their coldness, will, for some time, condense the moisture of such air, till they grow equally warm, and then they condense no more though the air is not become drier. And, on the other hand, after a warm season, if the air grows cold, though moister than before, the dew is not so apt to gather on the walls. A tankard of cold water will, in a hot and dry summer's day, collect a dew on its outside; a tankard of hot water will collect none in the moistest weather.

6thly. It is, I think, a mistake that the trade-winds blow only in the afternoon. They blow all day and all night, and all the year round, except in some particular places. The southerly sea-breezes on your coasts, indeed, blow chiefly in the afternoon. In the very long run from the west side of America to Guam, among the Philippine Islands, ships seldom have occasion to hand their sails, so equal and steady is the gale, and yet they make it in about 60 days, which could not be if the wind blew only in the afternoon.

7thly. That really is, which the gentleman justly supposes ought to be, on my hypothesis. In sailing southward, when you first enter the trade-wind, you find it north-east, or thereabouts, and it gradually grows more east as you approach the line. The same observation is made of its changing from south-east to east gradually, as you come from the southern latitudes to the equator.

Observations on the Meteorological Paper sent by Cadwallader Colden, of New York, to B. Franklin.—Read at the Royal Society, Nov. 4, 1756.

That power by which the air expands itself, you attribute to a mutual repelling power in the particles which compose the air, by which they are separated from each other with some degree of force; now this force, on this supposition, must not only act when the particles are in mutual contact, but likewise when they are at some distance from each other. How can two bodies, whether they be great or small, act at any distance, whether that distance be small or great, without something intermediate on which they act? For if any body act on another, at any distance from it, however small that distance be, without some medium, to continue the action, it must act where it is not, which to me seems absurd.

It seems to me, for the same reason, equally absurd to give a mutual attractive power between any other particles supposed to be at a distance from each other, without any thing intermediate to continue their mutual action. I can neither attract nor repel any thing at a distance, without something between my hand and that thing, like a string, or a stick; nor can I conceive any mutual action without some middle thing, when the action is continued to some distance.

The increase of the surface of any body lessens its weight, both in air, and water, or any other fluid, as appears by the slow descent of leaf-gold in the air.

The observation of the different density of the upper and lower air, from heat and cold, is good, and I do not remember it is taken notice of by others; the consequences also are well drawn; but as to winds, they seem principally to arise from some other cause. Winds generally blow from some large tracts of land, and from mountains. Where I live, on the north side of the mountains, we frequently have a strong southerly wind, when they have as strong a northerly wind, or calm, on the other side of these mountains. The continual passing of vessels on Hudson's River, through these mountains, give frequent opportunities of observing this.

In the spring of the year the sea-wind (by a piercing cold) is always more uneasy to me, accustomed to winds which pass over a tract of land, than the north-west wind.

You have received the common notion of water-spouts, which, from my own ocular observation, I am persuaded is a false conception. In a voyage to the West Indies, I had an opportunity of observing many water-spouts. One of them passed nearer than thirty or forty yards to the vessel I was in.

which I viewed with a good deal of attention; and though it be now forty years since I saw it, it made so strong an impression on me, that I very distinctly remember it. These water-spouts were in the calm latitudes, that is, between the trade and the variable winds, in the month of July. That spout which passed so near us was an inverted cone, with the *tip* or *apex* towards the sea, and reached within about eight feet of the surface of the sea, its basis in a large black cloud. We were entirely becalmed. It passed slowly by the vessel. I could plainly observe, that a violent stream of wind issued from the spout, which made a hollow of about six feet diameter in the surface of the water, and raised the water in a circular uneven ring round the hollow, in the same manner that a strong blast from a pair of bellows would do when the pipe is placed perpendicular to the surface of the water; and we plainly heard the same hissing noise which such a blast of wind must produce on the water. I am very sure there was nothing like the sucking of water from the sea into the spout, unless the spray, which was raised in a ring to a small height, could be mistaken for a raising of water. I could plainly distinguish a distance of about eight feet between the sea and the tip of the cone, in which nothing interrupted the sight, which must have been, had the water been raised from the sea.

In the same voyage I saw several other spouts at a greater distance, but none of them whose tip of the cone came so near the surface of the water. In some of them the axis of the cone was considerably inclined from the perpendicular, but in none of them was there the least appearance of sucking up of water. Others of them were bent or arched. I believe that a stream of wind issued from all of them, and it is from this stream of wind that vessels are often overset, or founder at sea suddenly. I have heard of vessels being overset when it was perfectly calm, the instant before the stream of wind struck them, and immediately after they were overset; which could not otherwise be but by such a stream of wind from a cloud.

That wind is generated in clouds will not admit of a dispute. Now if such wind be generated within the body of the cloud, and issue in one particular place, while it finds no passage in the other parts of the cloud, I think it may not be difficult to account for all the appearances in water-spouts: and from hence the reason of breaking those spouts, by firing a cannon-ball through them, as thereby a horizontal vent is given to the wind. When the wind is spent, which dilated the cloud, or the fermentation ceases, which generates the air and wind, the clouds may descend in a prodigious fall of water or rain. A remarkable intestine motion, like a violent fermentation, is very observable in the cloud from whence the spout issues. No salt-water, I am persuaded, was ever observed to fall from the clouds, which must certainly have happened if sea-water had been raised by a spout.

Answer to the foregoing Observations, by B. Franklin.—Read at the Royal Society, Nov. 4, 1756.

I AGREE with you, that it seems absurd to suppose that a body can act where it is not. I have no idea of bodies at a distance attracting or repelling one another without the assistance of some medium, though I know not what that medium is, or how it operates. When I speak of attraction or repulsion, I make use of those words for want of others more proper, and intend only to express *effects* which I see, and not *causes* of which I am ignorant. When I press a blown bladder between my knees, and find I cannot bring its sides together, but my knees feel a springy matter, pushing them back to a greater distance, or repelling them, I conclude that the air it contains is the cause. And when I operate on the air, and find I cannot by pressure force its particles into contact, but they still spring back against the pressure, I conceive there must be some medium between its particles that prevents their closing, though I cannot tell what it is. And if I were acquainted with that medium, and found its particles to approach and recede from each other, according to the pressure they suffered, I should imagine there must be some finer medium between them, by which these operations were performed.

I allow that increase of the surface of a body may occasion it to descend slower in air, water, or any other fluid: but do not conceive, therefore, that it lessens its weight. Where the increased surface is so disposed as that in its falling a greater quantity of the fluid it sinks in must be moved out of its way, a greater time is required for such removal. Four square feet of sheet lead sinking in water *broadways*, cannot descend near so fast as it would *edgeways*, yet its weight in the hydrostatic balance would, I imagine, be the same, whether suspended by the middle or by the corner.

I make no doubt but that ridges of high mountains do often interrupt, stop, reverberate, or turn the winds that blow against them, according to the different degrees of strength of the winds, and angles of incidence. I suppose too, that the cold upper parts of mountains may condense the warmer air that comes near them, and so by making it specifically heavier, cause it to descend on one or both sides of the ridge into the warmer valleys, which will seem a wind blowing from the mountains.

Damp winds, though not colder by the thermometer, give a more easy sensation of cold than dry ones, because (to speak like an electrician) they *conduct* better; that is, are better fitted to convey away the heat from our bodies. The body cannot feel *without* itself; our sensation of cold is not in the air *without* the body, but in those parts of the body which have been deprived of their heat by the air. My desk, and its lock, are, I suppose, of the same temperament when they have been long exposed to the same air; but now if I lay my hand on the wood, it does not seem as cold to me as the lock; because (as I imagine) wood is not so good a conductor, to receive and convey away the heat from my skin, and the adjacent flesh, as metal is. Take a piece of wood, of the size and shape of a dollar, between the thumb and finger of one hand, and a dollar, in like manner, with the other hand: place the edges of both, at the same time, in the flame of a candle: and though the edge of the wooden piece takes flame, and the metal piece does not, yet you will be obliged to drop the latter before the former, it conducting the heat more suddenly to your fingers. Thus we can, without pain, handle glass and china cups filled with hot liquors, as tea, &c. but not silver ones. A silver tea-pot must have a wooden handle. Perhaps it is for the same reason that woollen garments keeping the body warmer than linen ones equally thick; woollen keeping the natural heat in, or, in other words, not conducting it out to air.

In regard to water-spouts, having, in a long letter to a gentleman of the same sentiment with you as to their direction, said all that I have to say in support of my opinion; I need not repeat the arguments therein contained, as I intend to send you a copy of it by some other opportunity, for your perusal. I imagine you will find all the appearances you saw, accounted for by my hypothesis. I thank you for communicating the account of them. At present I would only say, that the opinion of winds being generated in clouds by fermentation, is new to me, and I am unacquainted with the facts on which it is founded. I likewise find it difficult to conceive of winds confined in the body of clouds, which I imagine have little more solidity than the fogs on the earth's surface. The objection from the freshness of rain-water is a strong one, but I think I have answered it in the letter above mentioned, to which I must beg leave, at present, to refer you.

Extracts from Dampier's Voyages.—Read at the Royal Society, December 16, 1756.

A SPOUT is a small ragged piece, or part of a cloud, hanging down about a yard seemingly, from the blackest part thereof. Commonly it hangs down sloping from thence, or sometimes appearing with a small bending, or elbow, in the middle. I never saw any hang perpendicularly down. It is small at the lower end, seeming no bigger than one's arm, but still fuller towards the cloud from whence it proceeds.

When the surface of the sea begins to work, you shall see the water for about one hundred paces in circumference foam and move gently round, till the whirling motion increases; and then it flies upwards in a pillar, about one hundred paces in compass at the bottom, but gradually lessening upwards, to the smallness of the spout itself, through which the rising sea-water seems to be conveyed into the clouds. This vissibly appears by the clouds increasing in bulk and blackness. Then you shall presently see the cloud drive along, though before it seemed to be without any motion. The spout also keeping the same course with the cloud, and still sucking up the water as it goes along, and they make a wind as they go. Thus it continues for half an hour, more or less, until the sucking is spent, and then breaking off, all the water which was below the spout, or pendulous piece of cloud, falls down again into the sea, making a great noise with its falling and clashing motion in the sea.

It is very dangerous for a ship to be under a spout when it breaks; therefore we always endeavour to shun it, by keeping at a distance, if possibly we can. But for want of wind to carry us away, we are often in great fear and danger, for it is usually calm when spouts are at work, except only just where they are. Therefore men at sea, when they see a spout coming, and know not how to avoid it, do sometimes fire shot out of their great guns into it, to give it air or vent, that so it may break; but I did never hear that it proved to be of any benefit.

And now we are on this subject, I think it not amiss to give you an account of an accident that happened to a ship once on the coast of Guinea, some time in or about the year 1674. One capt. Records of London, bound for the coast of Guinea, in a ship of three hundred tons, and sixteen guns, called the Blessing, when he came into latitude seven or eight degrees north, he saw several spouts, one of which came directly towards the ship, and he having no wind to get out of the way of the spout, made ready to receive it by furling the sails. It came on very swift, and broke a little before it reached the ship, making a great noise, and raising the sea round it, as if a great house, or some such thing, had been cast into the sea. The fury of the wind still lasted, and took the ship on the starboard-bow with such violence, that it snapt off the boltsprit and foremast both at once, and blew the ship all along, ready to overset it; but the ship did presently right

again, and the wind whirling round, took the ship a second time with the like fury as before, but on the contrary side, and was again like to overset her the other way: the mizen-mast felt the fury of this second blast, and was snapt short off, as the foremast and boltsprit had been before. The mainmast and main-top-mast received no damage, for the fury of the wind (which was presently over) did not reach them. Three men were in the foretop when the foremast broke, and one on the boltsprit, and fell with them into the sea, but all of them were saved. I had this relation from Mr. John Canby, who was then quarter-master and steward of her; one Abraham Wise was chief-mate, and Leonard Jefferies second-mate.

We are usually much afraid of them, yet this was the only damage that I ever heard done by them. They seem terrible enough, the rather because they come upon you while you lie becalmed, like a log in the sea, and cannot get out of their way. But though I have seen and been beset by them often, yet the fright was always the greatest of the harm.—*Dampier*, vol. i. page 451.

Account of a Spout on the coast of New Guinea—from the same.

"We had fair clear weather, and a fine moderate gale from south-east to east by north; but at day-break the clouds began to fly, and it lightened very much in the east north-east. At sun rising the sky looked very red in the east near the horizon; and there were many black clouds both to the south and north of it. About a quarter of an hour after the sun was up, there was a squall to the windward of us, when, on a sudden, one of our men on the fore-castle, called out that he saw something astern, but could not tell what. I looked out for it, and immediately saw a spout beginning to work within a quarter of a mile of us, exactly in the wind; we presently put right before it. It came very swiftly, whirling the water up in a pillar, about six or seven yards high. As yet I could not see any pendulous cloud from whence it might come; and was in hopes it would soon lose its force. In four or five minutes time it came within a cable's length of us, and passed away to leeward; and then I saw a long pale stream coming down to the whirling water. This stream was about the bigness of a rainbow. The upper end seemed vastly high, not descending from any dark cloud, and, therefore, the more strange to me, I never having seen the like before. It past about a mile to the leeward of us, and then broke. This was but a small spout, and not strong nor* lasting; yet I perceived much wind in it as it passed by."—Vol. iii. page 223.

Account of another Spout—from the same.

"We saw a spout but a small distance from us; it fell down out of a black cloud that yielded great store of rain, thunder, and lightning. This cloud hovered to the southward of us for the space of three hours, and then drew to the westward a great pace, at which time it was that we saw the spout, which hung fast to the cloud till it broke, and then the cloud whirled about to the south-east, then to the north-east, where meeting with an island, it spent itself, and so dispersed; and immediately we had a little of the tail of it, having had none before."—Vol. iii. page 182.

C. Colden to Dr. Franklin.—Read at the Royal Society, December 6, 1756.

April 2, 1754.

Any knowledge I have of the winds, and other changes which happen in the atmosphere, is so very defective, that it does not deserve the name; neither have I received any satisfaction from the attempts of others on this subject. It deserves then your thoughts, as a subject in which you may distinguish yourself, and be useful.

Your notion of some things conducting heat or cold better than others, pleases me, and I wish you may pursue the scent. If I remember right, Dr. Boerhaave, in his chemistry, thinks that heat is propagated by the vibration of a subtle elastic fluid, dispersed through the atmosphere and through all bodies. Sir Isaac Newton says, there are many phenomena to prove the existence of such a fluid: and this opinion has my assent to it. I shall only observe that it is essentially different from that which I call ether; for ether, properly speaking, is neither a fluid nor elastic; its power consists in re-acting any action communicated to it, with the same force it receives the action.

I long to see your explication of water-spouts, but I must tell you before hand, that it will not be easy for you to convince me that the principal phenomena were not occasioned by a stream of wind issuing with great force, my eyes and ears both concurring to give me this sentiment, I could have no more evidence than to feel the effects, which I had no inclination to do.

It surprises me a little, that wind, generated by fermentation is new to you, since it may be every day observed in fermenting liquor. You know with what force fermenting liquors will burst the vessels which contain them, if the generated wind have not vent; and with what force it issues on giving it a

* Probably if it had been lasting, a cloud would have been formed above it. These extracts from Dampier, seem, in different instances, to favour both opinions, and, therefore, are inserted entire, for the reader's consideration.

small vent, or by drawing the cork of a bottle. Dr. Boerhaave says, that the steam issuing from fermenting liquors received through a very small vent-hole, into the nose, will kill as suddenly and certainly as lightning That air is generated by fermentation, I think you will find fully proved in Dr. Hales's Analysis of the Air, in his Vegetable Statics. If you have not read the book, you have a new pleasure to come.

The solution you give to the objection I made from the contrary winds blowing from the opposite sides of the mountains, from there being eddies, does not please me, because the extent of these winds is by far too large to be occasioned by any eddy. It is forty miles from New York to our mountains, through which Hudson's River passes. The river runs twelve miles in the mountains, and from the north side of the mountains it is about ninety miles to Albany. I have myself been on board a vessel more than once, when we have had a strong northerly wind against us, all the way from New York, for two or three days. We have met vessels from Albany, who assured us, that, on the other side of the mountains, they had, at the same time, a strong continued southerly wind against them; and this frequently happens.

I have frequently seen, both on the river, in places where there could be no eddy-winds and on the open sea, two vessels sailing with contrary winds, within half a mile of each other; but this happens only in easy winds, and generally calm in other places near these winds.

You have, no doubt, frequently observed a single cloud pass, from which a violent gust of wind issues, but of no great extent. I have observed such a gust make a lane through the woods, of some miles in length, by laying the trees flat to the ground, and not above eight or ten chains in breadth. Though the violence of the wind be in the same direction in which the cloud moves and precedes it, yet wind issues from all sides of it; so that supposing the cloud moves south-easterly, those on the north-east side of it feel a south-west wind, and others on the south-west side, a north-east. And where the cloud passes over we frequently have a south-east wind from the hinder part of it, but none violent, except the wind in the direction in which the cloud moves. To show what it is which prevents the wind from issuing out equally on all sides is not an easy problem to me, and I shall not attempt to solve it; but when you shall show what it is which restrains the electrical fluid from spreading itself in the air surrounding it, when it rushes with great violence through the air along, or in the conductor, for a great extent in length, then I may hope to explain the other problem, and remove the difficulty we have in conceiving it.

To Peter Collinson.

Account of a Whirlwind in Maryland.

PHILADELPHIA, Aug. 25, 1755.

As you have my former papers on whirlwinds, &c. I now send you an account of one which I had lately an opportunity of seeing and examining myself.

Being in Maryland, riding with colonel Tasker, and some other gentlemen, to his country seat, where I and my son were entertained by that amiable and worthy man with great hospitality and kindness, we saw, in the vale below us, a small whirlwind beginning in the road, and showing itself by the dust it raised and contained. It appeared in the form of a sugar-loaf, spinning on its point, moving up the hill towards us, and enlarging as it came forward. When it passed by us, its smaller part near the ground appeared no bigger than a common barrel, widening upwards, it seemed, at forty or fifty feet high, to be twenty or thirty feet in diameter. The rest of the company stood looking after it, but my curiosity being stronger, I followed it, riding close by its side, and observed its licking up, in its progress, all the dust that was under its smaller part. As it is a common opinion that a shot, fired through a water-spout, will break it, I tried to break this little whirlwind, by striking my whip frequently through it, but without any effect. Soon after, it quitted the road and took into the woods, growing every moment larger and stronger, raising, instead of dust, the old dry leaves with which the ground was thick covered, and making a great noise with them and the branches of the trees, bending some tall trees round in a circle swiftly and very surprisingly, though the progressive motion of the whirl was not so swift but that a man on foot might have kept pace with it, but the circular motion was amazingly rapid. By the leaves it was now filled with, I could plainly perceive that the current of air they were driven by moved upwards in a spiral line; and when I saw the passing whirl continue entire, after leaving the trunks and bodies of large trees which it had enveloped, I no longer wondered that my whip had no effect on it in its smaller state. I accompanied it about three quarters of a mile, till some limbs of dead trees, broken off by the whirl, flying about, and falling near me, made me more apprehensive of danger: and then I stopped, looking at the top of it as it went on, which was visible, by means of the leaves contained in it, for a very great height above the trees. Many of the leaves, as they got loose from the upper and widest part, were scattered in the wind; but so great was their height in the air, that they appeared no bigger than flies.

My son, who was, by this time, come up with me, followed the whirlwind till it left the woods, and crossed an old tobacco-field, where,

finding neither dust nor leaves to take up, it gradually became invisible below, as it went away over that field. The course of the general wind then blowing was along with us as we travelled, and the progressive motion of the whirlwind was in a direction nearly opposite, though it did not keep a strait line, nor was its progressive motion uniform, it making little sallies on either hand as it went, proceeding sometimes faster, and sometimes slower, and seeming sometimes for a few seconds almost stationary, then starting forwards pretty fast again. When we rejoined the company, they were admiring the vast height of the leaves now brought by the common wind, over our heads. These leaves accompanied us as we travelled, some falling now and then round about us, and some not reaching the ground till we had gone near three miles from the place where we first saw the whirlwind begin. Upon my asking colonel Tasker if such whirlwinds were common in Maryland, he answered pleasantly, No, not at all common, but we got this on purpose to treat Mr. Franklin.—And a very high treat it was too. B. FRANKLIN.

Alexander Small, London.

On the North-east Storms in North America.

May 12, 1760.

AGREEABLE to your request, I send you my reasons for thinking that our north-east storms in North America begin first, in point of time, in the south-west parts: that is to say, the air in Georgia, the farthest of our colonies to the south-west, begins to move south-westerly before the air of Carolina, which is the next colony north-eastward; the air of Carolina, has the same motion before the air of Virginia, which lies still more north east-ward; and so on north-easterly through Pennsylvania, New York, New England, &c. quite to Newfoundland.

These north-east storms are generally very violent, continue sometimes two or three days, and often do considerable damage in the harbours along the coast. They are attended with thick clouds and rain.

What first gave me this idea, was the following circumstance. About twenty years ago, a few more or less, I cannot from my memory be certain, we were to have an eclipse of the moon at Philadelphia, on a Friday evening, about nine o'clock. I intended to observe it, but was prevented by a north-east storm, which came on about seven, with thick clouds as usual, that quite obscured the whole hemisphere. Yet when the post brought us the Boston newspaper, giving an account of the effects of the same storm in those parts, I found the beginning of the eclipse had been well observed there, though Boston lies N. E. of Philadelphia about four hundred miles. This puzzled me, because the storm began with us so soon as to prevent any observation, and being a north-east storm, I imagined it must have begun rather sooner in places farther to the north-eastward than it did at Philadelphia. I therefore mentioned it in a letter to my brother, who lived at Boston; and he informed me the storm did not begin with them till near eleven o'clock, so that they had a good observation of the eclipse; and upon comparing all the other accounts I received from the several colonies, of the time of beginning of the same storm, and since that of other storms of the same kind, I found the beginning to be always later the farther north-eastward. I have not my notes with me here in England, and cannot, from memory, say the proportion of time to distance, but I think it is about an hour to every hundred miles.

From thence I formed an idea of the cause of these storms, which I would explain by a familiar instance or two.—Suppose a long canal of water stopped at the end by a gate. The water is quite at rest till the gate is open, then it begins to move out through the gate; the water next the gate is first in motion, and moves towards the gate; the water next to that first water moves next, and so on successively, till the water at the head of the canal is in motion, which is last of all. In this case all the water moves indeed towards the gate, but the successive times of beginning motion are the contrary way, viz. from the gate backwards to the head of the canal. Again, suppose the air in a chamber at rest, no current through the room till you make a fire in the chimney. Immediately the air in the chimney being rarefied by the fire rises; the air next the chimney flows in to supply its place, moving towards the chimney; and, in consequence, the rest of the air successively, quite back to the door. Thus to produce our north-east storms, I suppose some great heat and rarefaction of the air in or about the gulph of Mexico; the air thence rising has its place supplied by the next more northern, cooler, and therefore denser and heavier, air; that, being in motion, is followed by the next more northern air, &c. in a successive current, to which current our coast and inland ridge of mountains give the direction of north-east as they lie N. E. and S. W.

This I offer only as an hypothesis to account for this particular fact; and perhaps, on farther examination, a better and truer may be found. I do not suppose all storms generated in the same manner. Our north-west thunder gusts in America, I know are not; but of them I have written my opinion fully in a paper which you have seen.

B. FRANKLIN.

To Dr. Percival, Manchester.

*Meteorological Imaginations and Conjectures.**

THERE seems to be a region higher, in the air over all countries, where it is always winter, where frost exists continually, since in the midst of summer, on the surface of the earth, ice falls often from above in the form of hail.

Hailstones, of the great weight we sometimes find them, did not probably acquire their magnitude before they began to descend. The air being eight hundred times rarer than water, is unable to support it but in the shape of vapour, a state in which its particles are separated. As soon as they are condensed by the cold of the upper region, so as to form a drop, that drop begins to fall. If it freezes into a grain of ice, that ice descends. In descending, both the drop of water and the grain of ice are augmented by particles of the vapour they pass through in falling, and which they condense by coldness, and attach to themselves.

It is possible that, in summer, much of what is rain, when it arrives at the surface of the earth, might have been snow when it began its descent; but being thawed, in passing through the warm air near the surface, it is changed from snow into rain.

How immensely cold must be the original particle of hail, which forms the centre of the future hailstone, since it is capable of communicating sufficient cold, if I may so speak, to freeze all the mass of vapour condensed round it, and form a lump of perhaps six or eight ounces in weight!

When, in summer time, the sun is high, and continues long every day above the horizon, his rays strike the earth more directly and with longer continuance, than in the winter; hence the surface is more heated, and to a greater depth, by the effect of those rays.

When rain falls on the heated earth, and soaks down into it, it carries down with it a great part of the heat, which by that means descends still deeper.

The mass of earth, to the depth of perhaps thirty feet, being thus heated to a certain degree, continues to retain its heat for some time. Thus the first snows that fall in the beginning of winter, seldom lie long on the surface, but are soon melted, and soon absorbed. After which, the winds that blow over the country on which the snows had fallen, are not rendered so cold as they would have been, by those snows, if they had remained, and thus the approach of the severity of winter is retarded; and the extreme degree of its cold is not always at the time we might expect it, viz. when the sun is at its greatest distance, and the day shortest, but some time after that period, according to the English proverb, which says, "as the day lengthens, the cold strengthens;" the causes of refrigeration continuing to operate, while the sun returns too slowly, and his force continues too weak to counteract them.

During several of the summer months of the year 1783, when the effects of the sun's rays to heat the earth in these northern regions should have been the greatest, there existed a constant fog over all Europe, and great part of North America. This fog was of a permanent nature: it was dry, and the rays of the sun seemed to have little effect towards dissipating it, as they easily do a moist fog, arising from water. They were indeed rendered so faint in passing through it, that when collected in the focus of a burning glass, they would scarce kindle brown paper. Of course, their summer effect in heating the earth was exceedingly diminished.

Hence the surface was early frozen.

Hence the first snows remained on it unmelted, and received continual additions.

Hence perhaps the winter of 1783–4, was more severe than any that had happened for many years.

The cause of this universal fog is not yet ascertained. Whether it was adventitious to this earth, and merely a smoke proceeding from the consumption by fire of some of those great burning balls or globes which we happen to meet with in our rapid course round the sun, and which are sometimes seen to kindle and be destroyed in passing our atmosphere, and whose smoke might be attracted and retained by our earth; or whether it was the vast quantity of smoke, long continuing to issue during the summer from Hecla, in Iceland, and that other volcano which arose out of the sea near that island, which smoke might be spread by various winds over the northern part of the world, is yet uncertain.

It seems however worth the inquiry, whether other hard winters, recorded in history, were preceded by similar permanent and widely extended summer fogs. Because, if found to be so, men might from such fogs conjecture the probability of a succeeding hard winter, and of the damage to be expected by the breaking up of frozen rivers in the spring; and take such measures as are possible and practicable, to secure themselves and effects from the mischiefs that attended the last.

Passy, May, 1784.

* This paper was inserted in the Memoirs of the Literary and Philosophical Society of Manchester, Vol. II. page 378. It was communicated by Dr. Percival, and read December 22, 1784.

To Dr. Lining, at Charleston.

On Cold produced by Evaporation.

NEW YORK, April 14, 1757.

IT is a long time since I had the pleasure of a line from you; and, indeed, the troubles

of our country, with the hurry of business I have been engaged in on that account, have made me so bad a correspondent, that I ought not to expect punctuality in others.

But being about to embark for England, I could not quit the continent without paying my respects to you, and, at the same time, taking leave to introduce to your acquaintance a gentleman of learning and merit, colonel Henry Bouquet, who does me the favour to present you this letter, and with whom I am sure you will be much pleased.

Professor Simpson, of Glasgow, lately communicated to me some curious experiments of a physician of his acquaintance, by which it appeared, that an extraordinary degree of cold, even to freezing, might be produced by evaporation, I have not had leisure to repeat and examine more than the first and easiest of them, viz. Wet the ball of a thermometer by a feather dipt in spirit of wine, which has been kept in the same room, and has, of course, the same degree of heat or cold. The mercury sinks presently three or four degrees, and the quicker, if during the evaporation you blow on the ball with bellows; a second wetting and blowing, when the mercury is down, carries it yet lower. I think I did not get it lower than five or six degrees from where it naturally stood, which was at that time sixty. But it is said, that a vessel of water being placed in another somewhat larger, containing spirit, in such a manner that the vessel of water is surrounded with the spirit, and both placed under the receiver of an air pump; on exhausting the air, the spirit, evaporating, leaves such a degree of cold as to freeze the water, though the thermometer, in the open air, stands many degrees above the freezing point. . . .

I know not how this phenomena is to be accounted for, but it gives me occasion to mention some loose notions relating to heat and cold, which I have for some time entertained, but not yet reduced into any form. Allowing common fire, as well as electrical, to be a fluid capable of permeating other bodies, and seeking an equilibrium, I imagine some bodies are better fitted by nature to be conductors of that fluid than others; and, that, generally, those which are the best conductors of the electric fluid, are also the best conductors of this; and *è contra*.

Thus a body which is a good conductor of fire readily receives it into its substance, and conducts it through the whole to all the parts, as metals and water do; and if two bodies, both good conductors, one heated, the other in its common state, are brought into contact with each other, the body which has most fire readily communicates of it to that which had least, and that which had least readily receives it, till an equilibrium is produced. Thus, if you take a dollar between your fingers with one hand, and a piece of wood, of the same dimensions, with the other, and bring both at the same time to the flame of a candle, you will find yourself obliged to drop the dollar before you drop the wood, because it conducts the heat of the candle sooner to your flesh. Thus, if a silver tea-pot had a handle of the same metal, it would conduct the heat from the water to the hand, and become too hot to be used; we therefore give to a metal tea-pot a handle of wood, which is not so good a conductor as metal. But a china or stone tea-pot being in some degree of the nature of glass, which is not a good conductor of heat, may have a handle of the same stuff. Thus, also, a damp moist air shall make a man more sensible of cold, or chill him more, than a dry air that is colder, because a moist air is fitter to receive and conduct away the heat of his body. This fluid, entering bodies in great quantity, first expands them, by separating their parts a little, afterwards, by farther separating their parts, it renders solids fluid, and at length dissipates their parts in air. Take this fluid from melted lead, or from water, the parts cohere again, the first grows solid, the latter becomes ice: and this is sooner done by the means of good conductors. Thus, if you take, as I have done, a square bar of lead, four inches long, and one inch thick, together with three pieces of wood planed to the same dimensions, and lay them on a smooth board, fixt so as not to be easily separated or moved, and pour into the cavity they form, as much melted lead as will fill it, you will see the melted lead chill, and become firm, on the side next the leaden bar, some time before it chills on the other three sides in contact with the wooden bars, though before the lead was poured in, they might all be supposed to have the same degree of heat or coldness, as they had been exposed in the same room to the same air. You will likewise observe, that the leaden bar, as it has cooled the melted lead more than the wooden bars have done, so it is itself more heated by the melted lead. There is a certain quantity of this fluid called fire, in every living human body, which fluid, being in due proportion, keeps the parts of the flesh and blood at such a just distance from each other, as that the flesh and nerves are supple, and the blood fit for circulation. If part of this due proportion of fire be conducted away, by means of a contact with other bodies, as air, water, or metals, the parts of our skin and flesh that come into such contact first, draw more near together than is agreeable, and give that sensation which we call cold; and if too much be conveyed away, the body stiffens, the blood ceases to flow, and death ensues. On the other hand, if too much of this fluid be communicated to the flesh, the parts are separated too far, and pain ensues, as when they are

separated by a pin or lancet. The sensation that the separation by fire occasions, we call heat or burning. My desk on which I now write, and the lock of my desk, are both exposed to the same temperature of the air, and have therefore the same degree of heat or cold: yet if I lay my hand successively on the wood and on the metal, the latter feels much the coldest, not that it is really so, but being a better conductor, it more readily than the wood takes away and draws into itself the fire that was in my skin. Accordingly if I lay one hand, part on the lock, and part on the wood, and after it had laid on some time, I feel both parts with my other hand, I find the part that has been in contact with the lock, very sensibly colder to the touch than the part that lay on the wood. How a living animal obtains its quantity of this fluid called fire, is a curious question. I have shown, that some bodies (as metals) have a power of attracting it stronger than others; and I have sometimes suspected, that a living body had some power of attracting out of the air, or other bodies, the heat it wanted. Thus metals hammered, or repeatedly bent, grow hot in the beat or hammered part. But when I consider that air, in contact with the body, cools it; that the surrounding air is rather heated by its contact with the body; that every breath of cooler air drawn in, carries off part of the body's heat when it passes out again; that therefore there must be in the body a fund for producing it, or otherwise the animal would soon grow cold: I have been rather inclined to think, that the fluid *fire*, as well as the fluid *air*, is attracted by plants in their growth, and becomes consolidated with the other materials of which they are formed, and makes a great part of their substance: that when they come to be digested, and to suffer in the vessels a kind of fermentation, part of the fire, as well as part of the air, recovers its fluid active state again, and diffuses itself in the body digesting and separating it: that the fire so reproduced, by digestion and separation continually leaving the body, its place is supplied by fresh quantities, arising from the continual separation. That whatever quickens the motion of the fluids in an animal quickens the separation, and reproduces more of the fire; as exercise. That all the fire emitted by wood, and other combustibles, when burning existed in them before, in a solid state, being only discovered when separating. That some fossils, as sulphur, sea coal, &c. contain a great deal of solid fire; and that, in short, what escapes and is dissipated in the burning of bodies, besides water and earth, is generally the air and fire that before made parts of the solid. Thus I imagine that animal heat arises by or from a kind of fermentation in the juices of the body, in the same manner as heat arises in the liquors preparing for distillation, wherein there is a separation of the spirituous, from the watery and earthy parts. And it is remarkable, that the liquor in a distiller's vat, when in its highest and best state of fermentation, as I have been informed, has the same degree of heat with the human body: that is, about 94 or 96.

Thus, as by a constant supply of fuel in a chimney, you keep a warm room, so, by a constant supply of food in the stomach, you keep a warm body; only where little exercise is used, the heat may possibly be conducted away too fast; in which case such materials are to be used for cloathing and bedding, against the effects of an immediate contact of the air, as are, in themselves, bad conductors of heat, and consequently, prevent its being communicated through their substance to the air. Hence, what is called *warmth* in wool, and its preference on that account, to linen; wool not being so good a conductor: and hence all the natural coverings of animals, to keep them warm, are such as retain and confine the natural heat in the body, by being bad conductors, such as wool, hair, feathers, and the silk by which the silkworm, in its tender embryo state, is first cloathed. Cloathing, thus considered, does not make a man warm by *giving* warmth, but by *preventing* the too quick dissipation of the heat produced in his body, and so occasioning an accumulation.

There is another curious question I will just venture to touch upon, viz. Whence arises the sudden extraordinary degree of cold, perceptible on mixing some chemical liquors, and even on mixing salt and snow, where the composition appears colder than the coldest of the ingredients? I have never seen the chemical mixtures made, but salt and snow I have often mixed myself, and am fully satisfied that the composition feels much colder to the touch, and lowers the mercury in the thermometer more than either ingredient would do separately. I suppose, with others, that cold is nothing more than the absence of heat or fire. Now if the quantity of fire before contained or diffused in the snow and salt was expelled in the uniting of the two matters, it must be driven away either through the air or the vessel containing them. If it is driven off through the air, it must warm the air, and a thermometer held over the mixture, without touching it, would discover the heat, by the rising of the mercury, as it must, and always does in warm air.

This, indeed, I have not tried, but I should guess it would rather be driven off through the vessel, especially if the vessel be metal, as being a better conductor than air; and so one should find the bason warmer after such mixture. But, on the contrary, the vessel grows cold, and even water, in which the

vessel is sometimes placed for the experiment, freezes into hard ice on the bason. Now I know not how to account for this, otherwise than by supposing, that the composition is a better conductor of fire than the ingredients separately, and, like the lock compared with the wood, has a stronger power of attracting fire, and does accordingly attract it suddenly from the fingers, or a thermometer put into it, from the bason that contains it, and from the water in contact with the outside of the bason; so that the fingers have the sensation of extreme cold, by being deprived of much of their natural fire; the thermometer sinks, by having part of its fire drawn out of the mercury; the bason grows colder to the touch, as, by having its fire drawn into the mixture, it is become more capable of drawing and receiving it from the hand; and through the bason, the water loses its fire that kept its fluid; so it becomes ice. One would expect, that from all this attracted acquisition of fire to the composition, it should become warmer; and, in fact, the snow and salt dissolve at the same time into water, without freezing.

B. FRANKLIN.

To Dr. Lining, at Charleston.

On the production of Cold by Evaporation.

London, June 17, 1758.

In a former letter I mentioned the experiment for cooling bodies by evaporation, and that I had, by repeatedly wetting the thermometer with common spirits, brought the mercury down five or six degrees. Being lately at Cambridge, and mentioning this in conversation with Dr. Hadley, professor of chemistry there, he proposed repeating the experiments with ether, instead of common spirits, as the ether is much quicker in evaporation. We accordingly went to his chamber, where he had both ether and a thermometer. By dipping first the ball of the thermometer into the ether, it appeared that the ether was precisely of the same temperament with the thermometer, which stood then at 65; for it made no alteration in the height of the little column of mercury. But when the thermometer was taken out of the ether, and the ether, with which the ball was wet, began to evaporate, the mercury sunk several degrees. The wetting was then repeated by a feather that had been dipped into the ether, when the mercury sunk still lower. We continued this operation, one of us wetting the ball, and another of the company blowing on it with the bellows, to quicken the evaporation, the mercury sinking all the time, till it came down to 7, which is 25 degrees below the freezing point, when we left off. Soon after it passed the freezing point, a thin coat of ice began to cover the ball. Whether this was water collected and condensed by the coldness of the ball, from the moisture in the air, or from our breath; or whether the feather, when dipped into the ether, might not sometimes go through it, and bring up some of the water that was under it, I am not certain; perhaps all might contribute. The ice continued increasing till we ended the experiment, when it appeared near a quarter of an inch thick all over the ball, with a number of small spicula, pointing outwards. From this experiment one may see the possibility of freezing a man to death on a warm summer's day, if he were to stand in a passage through which the wind blew briskly, and to be wet frequently with ether, a spirit that is more inflammable than brandy or common spirits of wine.

It is but within these few years, that the European philosophers seem to have known this power in nature, of cooling bodies by evaporation. But in the east they have long been acquainted with it. A friend tells me, there is a passage in Bernier's Travels through Hindostan, written near one hundred years ago, that mentions it as a practice (in travelling over dry deserts in that hot climate) to carry water in flasks wrapt in wet woollen cloths, and hung on the shady side of the camel, or carriage, but in the free air; whereby, as the cloths gradually grow drier, the water contained in the flasks is made cool. They have likewise a kind of earthen pots, unglazed, which let the water gradually and slowly ooze through their pores, so as to keep the outside a little wet, notwithstanding the continual evaporation, which gives great coldness to the vessel, and the water contained in it. Even our common sailors seem to have had some notion of this property; for I remember, that being at sea, when I was a youth, I observed one of the sailors, during a calm in the night, often wetting his finger in his mouth, and then holding it up in the air, to discover, as he said, if the air had any motion, and from which side it came; and this he expected to do, by finding one side of his finger grow suddenly cold, and from that side he should look for the next wind; which I then laughed at as a fancy.

May not several phenomena, hitherto unconsidered, or unaccounted for, be explained by this property? During the hot Sunday at Philadelphia, in June, 1750, when the thermometer was up at 100 in the shade, I sat in my chamber without exercise, only reading or writing, with no other clothes on than a shirt, and a pair of long linen drawers, the windows all open, and a brisk wind blowing through the house, the sweat ran off the backs of my hands, and my shirt was often so wet, as to induce me to call for dry ones to put on; in this situation, one might have expected, that the natural heat of the body 96, added to the heat of the air 100, should jointly have

created or produced a much greater degree of heat in the body; but the fact was, that my body never grew so hot as the air that surrounded it, or the inanimate bodies immersed in the same air. For I remember well, that the desk, when I laid my arm upon it; a chair, when I sat down in it; and a dry shirt out of the drawer, when I put it on, all felt exceeding warm to me, as if they had been warmed before a fire. And I suppose a dead body would have acquired the temperature of the air, though a living one, by coptinual sweating, and by the evaporation of that sweat, was kept cold. May not this be a reason why our reapers in Pennsylvania, working in the open field, in the clear hot sun-shine common in our harvest-time, find themselves well able to go through that labour, without being much incommoded by the heat, while they continue to sweat, and while they supply matter for keeping up that sweat, by drinking frequently of a thin evaporable liquor, water mixed with rum; but if the sweat stops, they drop, and sometimes die suddenly, if a sweating is not again brought on by drinking that liquor, or, as some rather choose in that case, a kind of hot punch, made with water, mixed with honey, and a considerable proportion of vinegar! May there not be in negroes a quicker evaporation of the perspirable matter from their skins and lungs, which, by cooling them more, enables them to bear the sun's heat better than whites do? (if that is a fact, as it is said to be; for the alleged necessity of having negroes rather than whites, to work in the West-India fields, is founded upon it) though the colour of their skins would otherwise make them more sensible of the sun's heat, since black cloth heats much sooner, and more, in the sun, than white cloth. I am persuaded, from several instances happening within my knowledge, that they do not bear cold weather so well as the whites; they will perish when exposed to a less degree of it, and are more apt to have their limbs frost-bitten; and may not this be from the same cause? Would not the earth grow much hotter under the summer-sun, if a constant evaporation from its surface, greater as the sun shines stronger, did not, by tending to cool it, balance, in some degree, the warmer effects of the sun's rays? Is it not owing to the constant evaporation from the surface of every leaf, that trees, though shone on by the sun, are always, even the leaves themselves, cool to our sense? at least much cooler than they would otherwise be? May it not be owing to this, that fanning ourselves when warm, does really cool us, though the air is itself warm that we drive with the fan upon our faces; for the atmosphere round, and next to our bodies, having imbibed as much of the perspired vapour as it can well contain, receives no more, and the evaporation is therefore checked and retarded, till we drive away that atmosphere, and bring drier air in its place, that will receive the vapour, and thereby facilitate and increase the evaporation? Certain it is, that mere blowing of air on a dry body does not cool it, as any one may satisfy himself, by blowing with a bellows on the dry ball of a thermometer; the mercury will not fall; if it moves at all, it rather rises, as being warmed by the friction of the air on its surface? To these queries of imagination, I will only add one practical observation; that wherever it is thought proper to give ease, in cases of painful inflammation in the flesh (as from burnings, or the like) by cooling the part; linen cloths, wet with spirit, and applied to the part inflamed, will produce the coolness required, better than if wet with water, and will continue it longer. For water, though cold when first applied, will soon acquire warmth from the flesh, as it does not evaporate fast enough; but the cloths wet with spirit, will continue cold as long as any spirit is left to keep up the evaporation, the parts warmed escaping as soon as they are warmed, and carrying off the heat with them.

B. FRANKLIN.

J. Bowdoin, in Boston, to Dr. Franklin.

Concerning the Light in Sea-Water.—Read at the Royal Society, December 6, 1756.

November 12, 1753.

——When I was at the eastward, I had an opportunity of observing the luminous appearance of the sea when disturbed: at the head and stern of the vessel, when under way, it appeared very bright. The best opportunity I had to observe it was in a boat, in company with several gentlemen going from Portsmouth, about three miles, to our vessel lying at the mouth of Piscataqua river. Soon after we set off (it being in the evening) we observed a luminous appearance, where the oars dashed the water. Sometimes it was very bright, and afterwards, as we rowed along, gradually lessened, till almost imperceptible, and then reillumined. This we took notice of several times in the passage. When I got on board the vessel, I ordered a pail to be dipped up, full of sea-water, in which, on the water's being moved a sparkling light appeared. I took a linen cloth, and strained some of the water through it, and there was a like appearance on the cloth, which soon went off; but on rubbing the cloth with my finger, it was renewed. I then carried the cloth to the light, but could not perceive any thing upon it which should cause that appearance.

Several gentlemen were of opinion, that the separated particles of putrid, animal, and other bodies, floating on the surface of the sea, might cause that appearance; for putrid fish, &c. they said, will cause it: and the sea-animals

which have died, and other bodies putrified therein since the creation, might afford a sufficient quantity of these particles to cover a considerable portion of the surface of the sea; which particles being differently dispersed, might account for the different degrees of light in the appearance above-mentioned. But this account seems liable to this obvious objection, that as putrid fish, &c. make a luminous appearance without being moved or disturbed, it might be expected that the supposed putrid particles on the surface of the sea, should always appear luminous, where there is not a greater light; and, consequently, that the whole surface of the sea, covered with those particles, should always, in dark nights, appear luminous, without being disturbed. But this is not the fact.

Among the rest, I threw out my conjecture, that the said appearance might be caused by a great number of little animals, floating on the surface of the sea, which, on being disturbed, might, by expanding their fins, or otherwise moving themselves, expose such a part of their bodies as exhibits a luminous appearance, somewhat in the manner of a glow-worm, or fire-fly: that these animals may be more numerous in some places than others; and, therefore, that the appearance abovementioned being fainter and stronger in different places, might be owing to that: that certain circumstances of weather, &c. might invite them to the surface, on which, in a calm, they might sport themselves and glow; or in storms, being forced up, make the same appearance.

There is no difficulty in conceiving that the sea may be stocked with animalcula for this purpose, as we find all nature crowded with life. But it seems difficult to conceive that such small portions of matter, even if they were wholly luminous, should affect our sight; much more so, when it is supposed that only a part of them is luminous. But, if we consider some other appearances, we may find the same difficulty to conceive of them; and yet we know they take place. For instance, the flame of a candle, which, it is said, may be seen four miles round. The light which fills this circle of eight miles diameter, was contained, when it first left the candle, within a circle of half an inch diameter. If the density of light, in these circumstances, be as those circles to each other, that is, as the squares of their diameters, the candle-light, when come to the eye, will be 1,027,709,337,600 times rarer than when it quitted the half inch circle. Now the aperture of the eye, through which the light passes, does not exceed one tenth of an inch diameter, and the portion of the lesser circle, which corresponds to this small portion of the greater circle, must be proportionably, that is, 1,027,709,337,600 times less than one tenth of an inch; and yet this infinitely small point (if you will allow the expression) affords light enough to make it visible four miles; or, rather, affords light sufficient to effect the sight at that distance.

The smallness of the animalcula is no objection then to this conjecture; for supposing them to be ten thousand times less than the *minimum visible*, they may, notwithstanding, emit light enough to affect the eyes, and so to cause the luminous appearance aforesaid. This conjecture I send you for want of something better.

Peter Franklin, Newport, R. Island.

On the Saltness of Sea-Water.

London, May 7, 1760.

—— It has, indeed, as you observe, been the opinion of some very great naturalists, that the sea is salt only from the dissolution of mineral or rock-salt, which its waters happen to meet with. But this opinion takes it for granted that all water was originally fresh, of which we can have no proof. I own I am inclined to a different opinion, and rather think all the water on this globe was originally salt, and that the fresh water we find in springs and rivers, is the produce of distillation. The sun raises the vapours from the sea, which form clouds, and fall in rain upon the land, and springs and rivers are formed of that rain. As to the rock-salt found in mines, I conceive that, instead of communicating its saltness to the sea, it is itself drawn from the sea, and that of course the sea is now fresher than it was originally. This is only another effect of nature's distillery, and might be performed various ways.

It is evident from the quantities of sea-shells, and the bones and teeth of fishes found in high lands, that the sea has formerly covered them. Then, either the sea has been higher than it now is, and has fallen away from those high lands, or they have been lower than they are, and were lifted up out of the water to their present height, by some internal mighty force, such as we still feel some remains of, when whole continents are moved by earthquakes. In either case it may be supposed that large hollows, or valleys among hills, might be left filled with sea-water, which evaporating, and the fluid part drying away in a course of years, would leave the salt covering the bottom; and that salt coming afterwards to be covered with earth, from the neighbouring hills, could only be found by digging through that earth. Or, as we know from their effects, that there are deep fiery caverns under the earth, and even under the sea, if at any time the sea leaks into any of them, the fluid parts of the water must evaporate from that heat, and pass off through some volcano, while the salt remains, and by

legrees, and continual accretion, becomes a great mass. Thus the cavern may at length be filled, and the volcano connected with it cease burning, as many it is said have done; and future miners, penetrating such cavern, find what we call a salt-mine. This is a fancy I had on visiting the salt-mines at Northwich, with my son. I send you a piece of the rock-salt which he brought up with him out of the mine. B. FRANKLIN.

Miss Stephenson.

On the Bristol Waters, and the Tide in Rivers.

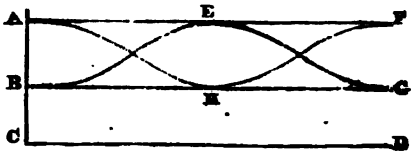
LONDON, Sept. 13, 1760.

I HAVE your agreeable letter from Bristol, which I take this first leisure hour to answer, having for some time been much engaged in business.

Your first question, *What is the reason the water at this place, though cold at the spring, becomes warm by pumping?* It will be most prudent in me to forbear attempting to answer, till, by a more circumstantial account, you assure me of the fact. I own I should expect that operation to warm, not so much the water pumped, as the person pumping.—The rubbing of dry solids together has been long observed to produce heat; but the like effect has never yet, that I have heard, been produced by the mere agitation of fluids, or friction of fluids with solids. Water in a bottle shook for hours by a mill-hopper, it is said, discovered no sensible addition of heat. The production of animal heat by exercise is therefore to be accounted for in another manner, which I may hereafter endeavour to make you acquainted with.

This prudence of not attempting to give reasons before one is sure of facts, I learnt from one of your sex, who, as Selden tells us, being in company with some gentlemen that were viewing, and considering something which they called a Chinese shoe, and disputing earnestly about the manner of wearing it, and how it could possibly be put on; put in her word, and said modestly, *Gentlemen, are you sure it is a shoe?—Should not that be settled first?*

But I shall now endeavour to explain what I said to you about the tide in rivers, and to that end shall make a figure, which though not very like a river, may serve to convey my meaning.—Suppose a canal one hundred and forty miles long, communicating at one end with the sea, and filled therefore with sea-water. I choose a canal at first, rather than a river, to throw out of consideration the effects produced by the streams of fresh water from the land, the inequality in breadth, and the crookedness of courses.



Let A, C, be the head of the canal; C, D, the bottom of it; D, F, the open mouth of it next the sea. Let the strait pricked line, B, G, represent low water mark the whole length of the canal, A, F, high water mark. Now if a person standing at E, and observing at the time of high water there, that the canal is quite full at that place up to the line E, should conclude that the canal is equally full to the same height from end to end, and therefore there was as much more water come into the canal since it was down at low water mark, as would be included in the oblong space A, B, G, F, he would be greatly mistaken. For the tide is *a wave*, and the top of the wave, which makes high water, as well as every other lower part, is progressive; and it is high water successively, but not at the same time, in all the several points between G, F, and A, B.—And in such a length as I have mentioned it is low water at F, G, and also at A, B, at or near the same time with its being high water at E; so that the surface of the water in the canal, during that situation, is properly represented by the curve pricked line, B, E, G. And on the other hand, when it is low water at E, H, it is high water both at F, G, and at A, B, at or near the same time: and the surface would then be described by the inverted curve line, A, H, F.

In this view of the case, you will easily see, that there must be very little more water in the canal at what we call high water, than there is at low water, those terms not relating to the whole canal at the same time, but successively to its parts. And if you suppose the canal six times as long, the case would not vary as to the quantity of water at different times of the tide; there would only be six waves in the canal at the same time, instead of one, and the hollows in the water would be equal to the hills.

That this is not mere theory, but conformable to fact, we know by our long rivers in America. The Delaware, on which Philadelphia stands, is in this particular similar to the canal I have supposed of one wave: for when it is high water at the Capes or mouth of the river, it is also high water at Philadelphia, which stands about one hundred and forty miles from the sea; and there is at the same time a low water in the middle between the two high waters; where, when it comes to be high water, it is at the same time low

water at the Capes and at Philadelphia. And the longer rivers have some a wave and half, some two, three, or four waves, according to their length. In the shorter rivers of this island, one may see the same thing in part; for instance, it is high water at Gravesend an hour before it is high water at London Bridge; and twenty miles below Gravesend an hour before it is high water at Gravesend. Therefore at the time of high water at Gravesend the top of the wave is there, and the water is then not so high by some feet where the top of the wave was an hour before, or where it will be an hour after, as it is just then at Gravesend.

Now we are not to suppose, that because the swell or top of the wave runs at the rate of twenty miles an hour, that therefore the current, or water itself of which the wave is composed, runs at that rate. Far from it. To conceive this motion of a wave, make a small experiment or two. Fasten one end of a cord in a window near the top of a house, and let the other end come down to the ground; take this end in your hand, and you may, by a sudden motion, occasion a wave in the cord that will run quite up to the window; but though the wave is progressive from your hand to the window, the parts of the rope do not proceed with the wave, but remain where they were, except only that kind of motion that produces the wave. So if you throw a stone into a pond of water when the surface is still and smooth, you will see a circular wave proceed from the stone at its centre, quite to the sides of the pond; but the water does not proceed with the wave, it only rises and falls to form it in the different parts of its course; and the waves that follow the first, all make use of the same water with their predecessors.

But a wave in water is not indeed in all circumstances exactly like that in a cord; for water being a fluid, and gravitating to the earth, it naturally runs from a higher place to a lower; therefore the parts of the wave in water do actually run a little both ways from its top towards its lower sides, which the parts of the wave in the cord cannot do. Thus, when it is high and standing water at Gravesend, the water twenty miles below has been running ebb, or towards the sea for an hour, or ever since it was high water there; but the water at London Bridge will run flood, or from the sea yet another hour, till it is high water, or the top of the wave arrives at that bridge, and then it will have run ebb an hour at Gravesend, &c. Now this motion of the water, occasioned only by its gravity, or tendency to run from a higher place to a lower, is by no means so swift as the motion of the wave. It scarce exceeds perhaps two miles in an hour.

If it went, as the wave does, twenty miles an hour, no ships could ride at anchor in such a stream, nor boats row against it.

In common speech, indeed, this current of the water both ways from the top of the wave is called *the tide*; thus we say, *the tide runs strong, the tide runs at the rate of one, two, or three miles an hour*, &c. and when we are at a part of the river behind the top of the wave, and find the water lower than high-water mark, and running towards the sea, we say, *the tide runs ebb*; and we are before the top of the wave, and find the water higher than low water mark, and running from the sea, we say, *the tide runs flood*; but these expressions are only locally proper; for a tide strictly speaking, is *one whole wave*, including all its parts higher and lower, and these waves succeed one another about twice in twenty-four hours.

This motion of the water, occasioned by its gravity, will explain to you why the water near the mouths of rivers may be salter at high water than at low. Some of the salt water, as the tide wave enters the river, runs from its top and fore side, and mixes with the fresh, and also pushes it back up the river.

Supposing that the water commonly runs during the flood at the rate of two miles in an hour, and that the flood runs five hours, you see that it can bring at most into our canal only a quantity of water equal to the space included in the breadth of the canal, ten miles of its length, and the depth between low and high water mark; which is but a fourteenth part of what would be necessary to fill all the space between low and high water mark, for one hundred and forty miles, the whole length of the canal.

And indeed such a quantity of water as would fill that whole space, to run in and out every tide, must create so outrageous a current, as would do infinite damage to the shores, shipping, &c. and make the navigation of a river almost impracticable.

I have made this letter longer than I intended, and therefore reserve for another what I have further to say on the subject of tides and rivers. I shall now only add, that I have not been exact in the numbers, because I would avoid perplexing you with minute calculations, my design at present being chiefly to give you distinct and clear ideas of the first principles.

After writing six folio pages of philosophy to a young girl, is it necessary to finish such a letter with a compliment?—Is not such a letter of itself a compliment?—Does it not say, she has a mind thirsty after knowledge, and capable of receiving it; and that the most agreeable things one can write to her are those that tend to the improvement of her understanding?—It does indeed say this, but then it is still no compliment; it is no more than plain honest truth, which is not the cha-

racter of a compliment. So if I would finish my letter in the *mode*, I should yet add something that means nothing, and is *merely* civil and polite. But being naturally awkward at every circumstance of ceremony, I shall not attempt it. I had rather conclude abruptly with what pleases me more than any compliment can please you, that I am allowed to subscribe myself. B. FRANKLIN.

To the same.

On the same Subject.

CRAVEN-STREET, Monday, March 30, 1761.

SUPPOSING the fact, that the water of the well at Bristol is warmer after some time pumping, I think your manner of accounting for that increased warmth very ingenious and probable. It did not occur to me, and therefore I doubted of the fact.

You are, I think, quite right in your opinion, that the rising of the tides in rivers is not owing to the immediate influence of the moon on the rivers. It is rather a subsequent effect of the influence of the moon on the sea, and does not make its appearance in some rivers till the moon has long passed by. I have not expressed myself clearly if you have understood me to mean otherwise. You know I have mentioned it as a fact, that there are in some rivers several tides all existing at the same time; that is, two, three, or more, high-waters, and as many low-waters, in different parts of the same river, which cannot possibly be all effects of the moon's immediate action on that river; but they may be subsequent effects of her action on the sea.

In the enclosed paper you will find my sentiments on several points relating to the air, and the evaporation of water. It is Mr. Collinson's copy, who took it from one I sent through his hands to a correspondent in France some years since; I have, as he desired me, corrected the mistakes he made in transcribing, and must return it to him; but if you think it worth while, you may take a copy of it: I would have saved you any trouble of that kind, but had not time.

Some day in the next or the following week, I purpose to have the pleasure of seeing you at Wanstead; I shall accompany your good mamma thither, and stay till the next morning, if it may be done without incommoding your family too much.—We may then discourse on any points in that paper that do not seem clear to you; and taking a walk to lord Tilney's ponds, make a few experiments there to explain the nature of the tides more fully. In the mean time believe me to be, with the highest esteem and regard, your sincerely affectionate friend, B. FRANKLIN.

To the same.

Salt-water rendered fresh by Distillation.—Method of relieving Thirst by Sea-Water.

CRAVEN-STREET, August 10, 1761.

WE are to set out this week for Holland, where we may possibly spend a month, but purpose to be at home again before the coronation. I could not go without taking leave of you by a line at least, when I am so many letters in your debt.

In yours of May 19, which I have before me, you speak of the ease with which salt water may be made fresh by distillation, supposing it to be, as I had said, that in evaporation the air would take up water but not the salt that was mixed with it. It is true that distilled sea water will not be salt, but there are other disagreeable qualities that rise with the water in distillation; which indeed several besides Dr. Hales have endeavoured by some means to prevent; but as yet their methods have not been brought much into use.

I have a singular opinion on this subject, which I will venture to communicate to you, though I doubt you will rank it among my whims. It is certain that the skin has *imbibing* as well as *discharging* pores; witness the effects of a blistering plaister, &c. I have read that a man, hired by a physician to stand by way of experiment in the open air naked during a moist night, weighed near three pounds heavier in the morning. I have often observed myself, that however thirsty I may have been before going into the water to swim, I am never long so in the water. These imbibing pores, however, are very fine, perhaps fine enough in filtering to separate salt from water; for though I have soaked (by swimming, when a boy) several hours in the day for several days successively in salt water, I never found my blood and juices salted by that means, so as to make me thirsty or feel a salt taste in my mouth: and it is remarkable, that the flesh of sea fish, though bred in salt water, is not salt. Hence I imagine, that if people at sea, distressed by thirst, when their fresh water is unfortunately spent, would make bathing-tubs of their empty water-casks, and, filling them with sea water, sit in them an hour or two each day, they might be greatly relieved. Perhaps keeping their clothes constantly wet might have an almost equal effect; and this without danger of catching cold. Men do not catch cold by wet clothes at sea. Damp, but not wet linen my possibly give colds, but no one catches cold by bathing, and no clothes can be wetter than water itself. Why damp clothes should then occasion colds, is a curious question, the discussion of which I reserve for a future letter, or some future conversation.

Adieu my little philosopher. Present my

respectful compliments to the good ladies your aunts, and to Miss Pitt; and believe me ever B. FRANKLIN.

To the same.

Tendency of rivers to the Sea—Effects of the Sun's rays on cloths of different colours.

September 20, 1761.

MY DEAR FRIEND,—It is, as you observed in our late conversation, a very general opinion, that *all rivers run into the sea*, or deposit their waters there. 'Tis a kind of audacity to call such general opinions in question, and may subject one to censure. But we must hazard something in what we think the cause of truth: and if we propose our objections modestly, we shall, though mistaken, deserve a censure less severe, than when we are both mistaken and insolent.

That some rivers run into the sea is beyond a doubt: such, for instance, are the Amazons, and I think the Oronoko and the Mississippi. The proof is, that their waters are fresh quite o the sea, and out to some distance from the and. Our question is, whether the fresh waters of those rivers whose beds are filled with salt water to a considerable distance up from the sea (as the Thames, the Delaware, and the rivers that communicate with Chesapeake bay in Virginia) do ever arrive at the sea? And as I suspect they do not, I am now to acquaint you with my reasons; or, if they are not allowed to be reasons, my conceptions at least, of this matter.

The common supply of rivers is from springs, which draw their origin from rain that has soaked into the earth. The union of a number of springs forms a river. The waters as they run exposed to the sun, air, and wind, are continually evaporating. Hence in travelling one may often see where a river runs, by a long bluish mist over it, though we are at such a distance as not to see the river itself. The quantity of this evaporation is greater or less, in proportion to the surface exposed by the same quantity of water to those causes of evaporation. While the river runs in a narrow confined channel in the upper hilly country, only a small surface is exposed; a greater as the river widens. Now if a river ends in a lake, as some do, whereby its waters are spread so wide as that the evaporation is equal to the sum of all its springs, that lake will never overflow:—and if instead of ending in a lake, it was drawn into greater length as a river, so as to expose a surface equal in the whole to that lake, the evaporation would be equal, and such river would end as a canal; when the ignorant might suppose, as they actually do in such cases, that the river loses itself by running under ground, whereas in truth it has run up into the air.

Now, how many rivers that are open to the sea widen much before they arrive at it, not merely by the additional waters they receive, but by having their course stopped by the opposing flood-tide; by being turned back twice in twenty-four hours, and by finding broader beds in the low flat countries to dilate themselves in; hence the evaporation of the fresh water is proportionably increased; so that in some rivers it may equal the springs of supply In such cases, the salt water comes up the river, and meets the fresh in that part where if there were a wall or bank of earth across, from side to side, the river would form a lake, fuller indeed at sometimes than at others, according to the seasons, but whose evaporation would, one time with another, be equal to its supply.

When the communication between the two kinds of water is open, this supposed wall of separation may be conceived as a moveable one, which is not only pushed some miles higher up the river by every flood tide from the sea, and carried down again as far by every tide of ebb, but which has even this space of vibration removed nearer to the sea in wet seasons, when the springs and brooks in the upper country are augmented by the falling rains, so as to swell the river, and farther from the sea in dry seasons.

Within a few miles above and below this moveable line of separation, the different waters mix a little, partly by their motion to and fro, and partly from the greater specific gravity of the salt water, which inclines it to run under the fresh, while the fresh water, being lighter, runs over the salt.

Cast your eye on the map of North America, and observe the bay of Chesapeake in Virginia, mentioned above; you will see, communicating with it by their mouths, the great rivers Susquehanna, Potowmac, Rappahannoc, York, and James, besides a number of smaller streams, each as big as the Thames. It has been proposed by philosophical writers, that to compute how much water any river discharges into the sea in a given time, we should measure its depth and swiftness at any part above the tide; as for the Thames, at Kingston or Windsor. But can one imagine, that if all the water of those vast rivers went to the sea, it would not first have pushed the salt water out of that narrow mouthed bay, and filled it with fresh?—The Susquehanna alone would seem to be sufficient for this, if it were not for the loss by evaporation. And yet that bay is salt quite up to Annapolis.

As to our other subject, the different degrees of heat imbibed from the sun's rays by cloths of different colours, since I cannot find the notes of my experiment to send you, I must give it as well as I can from memory.

But first let me mention an experiment you may easily make yourself. Walk but a quarter of an hour in your garden when the sun

shines, with a part of your dress white, and a part black; then apply your hand to them alternately, and you will find a very great difference in their warmth. The black will be quite hot to the touch, the white still cool.

Another. Try to fire the paper with a burning glass. If it is white, you will not easily burn it;—but if you bring the focus to a black spot, or upon letters, written or printed, the paper will immediately be on fire under the letters.

Thus fullers and dyers find black cloths, of equal thickness with white ones, and hung out equally wet, dry in the sun much sooner than the white, being more readily heated by the sun's rays. It is the same before a fire; the heat of which sooner penetrates black stockings than white ones, and so is apt sooner to burn a man's shins. Also beer much sooner warms in a black mug set before the fire, than in a white one, or in a bright silver tankard.

My experiment was this. I took a number of little square pieces of broad cloth from a taylor's pattern-card, of various colours.—There were black, deep blue, lighter blue, green, purple, red, yellow, white, and other colours, or shades of colours. I laid them all out upon the snow in a bright sun-shiney morning. In a few hours (I cannot now be exact as to the time) the black being warmed most by the sun, was sunk so low as to be below the stroke of the sun's rays; the dark blue almost as low, the lighter blue not quite so much as the dark, the other colours less as they were lighter; and the quite white remained on the surface of the snow, not having entered it at all.

What signifies philosophy that does not apply to some use?—May we not learn from hence, that black clothes are not so fit to wear in a hot sunny climate or season, as white ones; because in such clothes the body is more heated by the sun when we walk abroad, and are at the same time heated by the exercise, which double heat is apt to bring on putrid dangerous fevers? That soldiers and seamen, who must march and labour in the sun, should in the East or West Indies have an uniform of white? That summer hats, for men or women, should be white, as repelling that heat which gives head-aches to many, and to some the fatal stroke that the French call the *coup de soleil?* That the ladies' summer hats, however, should be lined with black, as not reverberating on their faces those rays which are reflected upwards from the earth or water? That the putting a white cap of paper or linen *within* the crown of a black hat, as some do, will not keep out the heat, though it would if placed *without*. That fruit-walls being blacked may receive so much heat from the sun in the day-time, as to continue warm in some degree through the night, and thereby preserve the fruit from frosts, or forward its growth?—with sundry other particulars of less or greater importance, that will occur from time to time to attentive minds? B. FRANKLIN.

To the same.

On the Effect of Air on the Barometer, and the Benefits derived from the Study of Insects.

CRAVEN-STREET, June 11, 1760.

'Tis a very sensible question you ask, how the air can affect the barometer, when its opening appears covered with wood? If indeed it was so closely covered as to admit of no communication of the outward air to the surface of the mercury, the change of weight in the air could not possibly affect it. But the least crevice is sufficient for the purpose; a pin-hole will do the business. And if you could look behind the frame to which your barometer is fixed, you would certainly find some small opening.

There are indeed some barometers in which the body of mercury at the lower end is contained in a close leather bag, and so the air cannot come into immediate contact with the mercury; yet the same effect is produced. For the leather being flexible, when the bag is pressed by any additional weight of air it contracts, and the mercury is forced up into the tube; when the air becomes lighter, and its pressure less, the weight of the mercury prevails, and it descends again into the bag.

Your observation on what you have lately read concerning insects is very just and solid. Superficial minds are apt to despise those who make that part of the creation their study, as mere triflers; but certainly the world has been much obliged to them. Under the care and management of man, the labours of the little silkworm afford employment and subsistence to thousands of families, and become an immense article of commerce. The bee, too, yields us its delicious honey, and its wax useful to a multitude of purposes. Another insect, it is said, produces the cochineal, from whence we have our rich scarlet dye. The usefulness of the cantharides or Spanish flies, in medicine, is known to all, and thousands owe their lives to that knowledge. By human industry and observation, other properties of other insects may possibly be hereafter discovered, and of equal utility. A thorough acquaintance with the nature of these little creatures may also enable mankind to prevent the increase of such as are noxious, or secure us against the mischiefs they occasion. These things doubtless your books make mention of: I can only add a particular late instance which I had from a Swedish gentleman of good credit. In the green timber, intended for ship-building at

the king's yard in that country, a kind of worms were found, which every year became more numerous and more pernicious, so that the ships were greatly damaged before they came into use. The king sent Linnæus, the great naturalist, from Stockholm, to inquire into the affair, and see if the mischief was capable of any remedy. He found, on examination, that the worm was produced from a small egg, deposited in the little roughnesses on the surface of the wood, by a particular kind of fly or beetle; from whence the worm, as soon as it was hatched, began to eat into the substance of the wood, and after some time came out again a fly of the parent kind, and so the species increased. The season in which the fly laid its eggs, Linnæus knew to be about a fortnight (I think) in the month of May, and at no other time in the year. He therefore advised, that some days before that season, all the green timber should be thrown into the water, and kept under water till the season was over. Which being done by the king's order, the flies missing the usual nests, could not increase; and the species was either destroyed or went elsewhere: and the wood was effectually preserved, for after the first year, it became too dry and hard for their purpose.

There is, however, a prudent moderation to be used in studies of this kind. The knowledge of nature may be ornamental, and it may be useful, but if to attain an eminence in that, we neglect the knowledge and practice of essential duties, we deserve reprehension. For there is no rank in natural knowledge of equal dignity and importance with that of being a good parent, a good child, a good husband or wife, a good neighbour or friend, a good subject or citizen, that is, in short, a good Christian. Nicholas Gimcrack, therefore, who neglected the care of his family, to pursue butterflies, was a just object of ridicule, and we must give him up as fair game to the satyrist.

B. FRANKLIN.

To Dr. Joseph Priestley.

Effect of Vegetation on Noxious Air.

——That the vegetable creation should restore the air which is spoiled by the animal part of it, looks like a rational system, and seems to be of a piece with the rest. Thus fire purifies water all the world over. It purifies it by distillation, when it raises it in vapours, and lets it fall in rain; and farther still by filtration, when, keeping it fluid, it suffers that rain to percolate the earth. We knew before, that putrid animal substances were converted into sweet vegetables, when mixed with the earth, and applied as manure; and now, it seems, that the same putrid substances, mixed with the air, have a similar effect. The strong thriving state of your mint, in putrid air, seems to show, that the air is mended by taking something from it, and not by adding to it. I hope this will give some check to the rage of destroying trees that grow near houses, which has accompanied our late improvements in gardening, from an opinion of their being unwholesome. I am certain, from long observation, that there is nothing unhealthy in the air of woods; for we Americans have every where our country habitations in the midst of woods, and no people on earth enjoy better health, or are more prolific.

B. FRANKLIN.

To the same.

On the Inflammability of the Surface of certain Rivers in America.

Craven-street, April 10, 1774.

In compliance with your request, I have endeavoured to recollect the circumstances of the American experiments I formerly mentioned to you, of raising a flame on the surface of some waters there.

When I passed through New Jersey in 1764, I heard it several times mentioned, that by applying a lighted candle near the surface of some of their rivers, a sudden flame would catch and spread on the water, continuing to burn for near half a minute. But the accounts I received were so imperfect, that I could form no guess at the cause of such an effect, and rather doubted the truth of it. I had no opportunity of seeing the experiment; but calling to see a friend who happened to be just returning home from making it himself, I learned from him the manner of it; which was to choose a shallow place, where the bottom could be reached by a walking-stick, and was muddy; the mud was first to be stirred with the stick, and when a number of small bubbles began to arise from it, the candle was applied. The flame was so sudden and so strong, that it catched his ruffle and spoiled it, as I saw. New Jersey having many pine-trees in many parts of it, I then imagined that something like a volatile oil of turpentine might be mixed with the waters from a pine-swamp, but this supposition did not quite satisfy me. I mentioned the fact to some philosophical friends on my return to England, but it was not much attended to. I suppose I was thought a little too credulous.

In 1765, the Reverend Dr. Chandler received a letter from Dr. Finley, President of the College in that province, relating the same experiment. It was read at the Royal Society, November 21, of that year, but not printed in the Transactions; perhaps because it was thought too strange to be true, and some ridicule might be apprehended, if any member should attempt to repeat it, in order

to ascertain, or refute it. The following is a copy of that account.

"A worthy gentleman, who lives at a few miles distance, informed me, that in a certain small cove of a mill-pond, near his house, he was surprised to see the surface of the water blaze like inflamed spirits. I soon after went to the place, and made the experiment with the same success. The bottom of the creek was muddy, and when stirred up, so as to cause a considerable curl on the surface, and a lighted candle held within two or three inches of it, the whole surface was in a blaze, as instantly as the vapour of warm inflammable spirits, and continued when strongly agitated, for the space of several seconds. It was at first imagined to be peculiar to that place; but upon trial it was soon found, that such a bottom in other places exhibited the same phenomenon. The discovery was accidentally made by one belonging to the mill."

I have tried the experiment twice here in England, but without success. The first was in a slow running water with a muddy bottom. The second in a stagnant water at the bottom of a deep ditch. Being some time employed in stirring this water, I ascribed an intermitting fever, which seized me a few days after, to my breathing too much of that foul air, which I stirred up from the bottom, and which I could not avoid while I stooped, endeavouring to kindle it. The discoveries you have lately made, of the manner in which inflammable air is in some cases produced, may throw light on this experiment, and explain its succeeding in some cases, and not in others. With the highest esteem and respect,

B. FRANKLIN.

To Dr. Percival.

On the different quantities of Rain which fall at different heights over the same ground.—Read in the Philosophical Society of Manchester, January 21, 1784.

On my return to London I found your favour of the 16th of May (1771.) I wish I could, as you desire, give you a better explanation of the phenomenon in question, since you seem not quite satisfied with your own; but I think we want more and a greater variety of experiments in different circumstances, to enable us to form a thoroughly satisfactory hypothesis. Not that I make the least doubt of the facts already related, as I know both lord Charles Cavendish and Dr. Heberden to be very accurate experimenters: but I wish to know the event of the trials proposed in your six queries; and also, whether in the same place where the lower vessel receives nearly twice the quantity of water that is received by the upper, a third vessel placed at half the height will receive a quantity proportionable. I will however endeavour to explain to you what occurred to me, when I first heard of the fact.

I suppose it will be generally allowed, on a little consideration of the subject, that scarce any drop of water was, when it began to fall from the clouds, of a magnitude equal to that it has acquired, when it arrives at the earth; the same of the several pieces of hail; because they are often so large and so weighty, that we cannot conceive a possibility of their being suspended in the air, and remaining at rest, there for any time, how small soever; nor do we conceive any means of forming them so large, before they set out to fall. It seems then, that each beginning drop, and particle of hail, receives continual addition in its progress downwards. This may be several ways: by the union of numbers in their course, so that what was at first only descending mist, becomes a shower; or by each particle, in its descent through air that contains a great quantity of dissolved water, striking against, attaching to itself, and carrying down with it such particles of that dissolved water, as happen to be in its way; or attracting to itself such as do not lie directly in its course by its different state, with regard either to common or electric fire; or by all these causes united.

In the first case, by the uniting of numbers, larger drops might be made, but the quantity falling in the same place would be the same at all heights; unless, as you mention, the whole should be contracted in falling, the lines described by all the drops converging, so that what set out to fall from a cloud of many thousand acres, should reach the earth in perhaps a third of that extent, of which I somewhat doubt. In the other cases we have two experiments.

1. A dry glass bottle filled with very cold water, in a warm day, will presently collect from the seemingly dry air that surrounds it a quantity of water, that shall cover its surface and run down its sides, which perhaps is done by the power wherewith the cold water attracts the fluid, common fire that had been united with the dissolved water in the air, and drawing the fire through the glass into itself, leaves the water on the outside.

2. An electrified body left in a room for some time, will be more covered with dust than other bodies in the same room not electrified, which dust seems to be attracted from the circumambient air.

Now we know that the rain, even in our hottest days, comes from a very cold region. Its falling sometimes in the form of ice, shows this clearly; and perhaps even the rain is snow or ice, when it first moves downwards, though thawed in falling: and we know that the drops of rain are often electrified: but those causes of addition to each drop of water or

piece of hail, one would think could not long continue to produce the same effect; since the air, through which the drops fall, must soon be stripped of its previously dissolved water, so as to be no longer capable of augmenting them. Indeed very heavy showers, of either, are never of long continuance; but moderate rains often continue so long as to puzzle this hypothesis: so that upon the whole I think, as I intimated before, that we are yet hardly ripe for making one. B. FRANKLIN.

Mr. Nairne, London.

On the properties of an Hygrometer.—Read in the Transactions of the American Philosophical Society, January 26, 1780.

Passy, near Paris, Nov. 13, 1780.

The qualities hitherto sought in a hygrometer, or instrument to discover the degrees of moisture and dryness in the air, seem to have been, an aptitude to receive humidity readily from a moist air, and to part with it as readily to a dry air. Different substances have been found to possess more or less of this quality; but when we shall have found the substance that has it in the greatest perfection, there will still remain some uncertainty in the conclusions to be drawn from the degree shown by the instrument, arising from the actual state of the instrument itself as to heat and cold. Thus, if two bottles or vessels of glass or metal being filled, the one with cold and the other with hot water, are brought into a room, the moisture of the air in the room will attach itself in quantities to the surface of the cold vessel, while if you actually wet the surface of the hot vessel, the moisture will immediately quit it, and be absorbed by the same air. And thus, in a sudden change of the air from cold to warm, the instrument remaining longer cold, may condense and absorb more moisture, and mark the air as having become more humid than it is in reality, and the contrary in a change from warm to cold.

But if such a suddenly changing instrument could be freed from these imperfections, yet when the design is to discover the different degrees of humidity in the air of different countries, I apprehend the quick sensibility of the instrument to be rather a disadvantage; since to draw the desired conclusions from it, a constant and frequent observation day and night in each country will be necessary for a year or years, and the mean of each different set of observations is to be found and determined. After all which some uncertainty will remain respecting the different degrees of exactitude with which different persons may have made and taken notes of their observations.

For these reasons, I apprehend that a substance which, though capable of being distended by moisture and contracted by dryness, is so slow in receiving and parting with its humidity, that the frequent changes in the atmosphere have not time to affect it sensibly, and which therefore should gradually take nearly the medium of all those changes and preserve it constantly, would be the most proper substance of which to make such an hygrometer.

Such an instrument, you, my dear sir, though without intending it, have made for me; and I, without desiring or expecting it, have received from you. It is therefore with propriety that I address to you the following account of it; and the more, as you have both a head to contrive and a hand to execute the means of perfecting it. And I do this with greater pleasure, as it affords me the opportunity of renewing that ancient correspondence and acquaintance with you, which to me was always so pleasing and so instructive.

You may possibly remember, that in or about the year 1758, you made for me a set of artificial magnets, six in number, each five and a half inches long, half an inch broad, and one eighth of an inch thick. These, with two pieces of soft iron, which together equalled one of the magnets, were enclosed in a little box of mahogany wood, the grain of which ran with, and not across, the length of the box: and the box was closed by a little shutter of the same wood, the grain of which ran across the box: and the ends of this shutting piece were bevelled so as to fit and slide in a kind of dovetail groove when the box was to be shut or opened.

I had been of opinion, that good mahogany wood was not affected by moisture so as to change its dimensions, and that it was always to be found as the tools of the workman left it. Indeed the difference at different times in the same country is so small as to be scarcely in a common way observable. Hence the box, which was made so as to allow sufficient room for the magnets to slide out and in freely, and, when in, afforded them so much play that by shaking the box one could make them strike the opposite sides alternately, continued in the same state all the time I remained in England, which was four years, without any apparent alteration. I left England in August 1762, and arrived at Philadelphia in October the same year. In a few weeks after my arrival, being desirous of showing your magnets to a philosophical friend, I found them so tight in the box, that it was with difficulty I got them out; and constantly during the two years I remained there, viz. till November 1764, this difficulty of getting them out and in continued. This little shutter too, as wood does not shrink lengthways of the grain, was found too long to enter its grooves, and, not being used, was mislaid and lost; and afterwards I had another made that fitted.

In December, 1764, I returned to England,

and after some time I observed that my box was become full big enough for my magnets, and too wide for my new shutter; which was so much too short for its grooves, that it was apt to fall out; and to make it keep in I lengthened it by adding to each end a little coat of sealing-wax.

I continued in England more than ten years, and during all that time, after the first change, I perceived no alteration. The magnets had the same freedom in their box, and the little shutter continued with the added sealing-wax to fit its grooves, till some weeks after my second return to America.

As I could not imagine any other cause for this change of dimensions in the box, when in the different countries, I concluded, first generally that the air of England was moister than that of America. And this I supposed an effect of its being an island, where every wind that blew must necessarily pass over some sea before it arrived, and of course lick up some vapour. I afterwards indeed doubted whether it might be just only so far as related to the city of London, where I resided; because there are many causes of moisture in the city air, which do not exist to the same degree in the country; such as the brewers and dyers boiling caldrons, and the great number of pots and tea-kettles continually on the fire, sending forth abundance of vapour; and also the number of animals who by their breath continually increase it; to which may be added, that even the vast quantity of sea coals burnt there, do in kindling, discharge a great deal of moisture.

When I was in England the last time, you also made for me a little achromatic pocket telescope, the body was brass, and it had a round case, (I think of thin wood) covered with shagreen. All the while I remained in England, though possibly there might be some small changes in the dimensions of this case, I neither perceived nor suspected any. There was always comfortable room for the telescope to slip in and out. But soon after I arrived in America, which was in May 1775, the case became too small for the instrument, it was with much difficulty and various contrivances that I got it out, and I could never after get it in again, during my stay there, which was eighteen months. I brought it with me to Europe, but left the case as useless, imagining I should find the continental air of France as dry as that of Pennsylvania, where my magnet box had also returned a second time to its narrowness, and pinched the pieces, as heretofore, obliging me too, to scrape the sealing-wax off the ends of the shutter.

I had not been long in France, before I was surprised to find, that my box was become as large as it had always been in England, the magnets entered and came out with the same freedom, and when in, I could rattle them against its sides; this has continued to be the case without sensible variation. My habitation is out of Paris distant almost a league, so that the moist air of the city cannot be supposed to have much effect upon the box. I am on a high dry hill, in a free air, as likely to be dry as any air in France.—Whence it seems probable that the air of England in general may, as well as that of London, be moister than the air of America, since that of France is so, and in a part so distant from the sea.

The greater dryness of the air in America appears from some other observations. The cabinet work formerly sent us from London, which consisted in thin plates of fine wood glued upon fir, never would stand with us; the veneering, as those plates are called, would get loose and come off: both woods shrinking, and their grains often crossing, they were for ever cracking and flying. And in my electrical experiments there, it was remarkable, that a mahogany table, on which my jars stood under the prime conductor to be charged, would often be so dry, particularly when the wind had been some time at north-west, which with us is a very drying wind, as to isolate the jars, and prevent their being charged till I had formed a communication between their coatings and the earth. I had a like table in London, which I used for the same purpose all the while I resided there; but it was never so dry as to refuse conducting the electricity.

Now what I would beg leave to recommend to you, is, that you would recollect, if you can, the species of mahogany of which you made my box, for you know there is a good deal of difference in woods that go under that name; or if that cannot be, that you would take a number of pieces of the closest and finest grained mahogany that you can meet with, plane them to the thinness of about a line, and the width of about two inches across the grain, and fix each of the pieces in some instrument that you can contrive, which will permit them to contract and dilate, and will show, in sensible degrees, by a moveable hand upon a marked scale, the otherwise less sensible quantities of such contraction and dilation. If these instruments are all kept in the same place while making, and are graduated together while subject to the same degrees of moisture or dryness, I apprehend you will have so many comparable hygrometers, which, being sent into different countries, and continued there for some time, will find and show there the mean of the different dryness and moisture of the air of those countries, and that with much less trouble than by any hygrometer hitherto in use.

B. FRANKLIN.

To Dr. John Pringle.

On the Difference of Navigation in shoal and deep Water.

CRAVEN-STREET, May 10, 1768.

You may remember, that when we were travelling together in Holland, you remarked, that the trackschuyt in one of the stages went slower than usual, and inquired of the boatman, what might be the reason; who answered, that it had been a dry season, and the water in the canal was low. On being asked if it was so low as that the boat touched the muddy bottom; he said, no, not so low as that, but so low as to make it harder for the horse to draw the boat. We neither of us at first could conceive that if there was water enough for the boat to swim clear of the bottom, its being deeper would make any difference; but as the man affirmed it seriously, as a thing well known among them; and as the punctuality required in their stages was likely to make such difference, if any there were, more readily observed by them than by other watermen who did not pass so regularly and constantly backwards and forwards in the same track; I began to apprehend there might be something in it, and attempted to account for it from this consideration, that the boat in proceeding along the canal, must in every boat's length of her course, move out of her way a body of water, equal in bulk to the room her bottom took up in the water; that the water so moved must pass on each side of her and under her bottom to get behind her; that if the passage under her bottom was straitened by the shallows, more of that water must pass by her sides, and with a swifter motion, which would retard her, as moving the contrary way; or that the water becoming lower behind the boat than before, she was pressed back by the weight of its difference in height, and her motion retarded by having that weight constantly to overcome. But as it is often lost time to attempt accounting for uncertain facts, I determined to make an experiment of this when I should have convenient time and opportunity.

After our return to England, as often as I happened to be on the Thames, I inquired of our watermen whether they were sensible of any difference in rowing over shallow or deep water. I found them all agreeing in the fact, that there was a very great difference, but they differed widely in expressing the quantity of the difference; some supposing it was equal to a mile in six, others to a mile in three, &c. As I did not recollect to have met with any mention of this matter in our philosophical books, and conceiving that if the difference should really be great, it might be an object of consideration in the many projects now on foot for digging new navigable canals in this island, I lately put my design of making the experiment in execution, in the following manner.

I provided a trough of plained boards fourteen feet long, six inches wide and six inches deep, in the clear, filled with water within half an inch of the edge, to represent a canal I had a loose board of nearly the same length and breadth, that, being put into the water, might be sunk to any depth, and fixed by little wedges where I would choose to have it stay; in order to make different depths of water, leaving the surface at the same height with regard to the sides of the trough. I had a little boat in form of a lighter or boat of burden, six inches long, two inches and a quarter wide, and one inch and a quarter deep. When swimming, it drew one inch water. To give motion to the boat, I fixed one end of a long silk thread to its bow, just even with the water's edge, the other end passed over a well made brass pully, of about an inch diameter, turning freely on a small axis; and a shilling was the weight. Then placing the boat at one end of the trough, the weight would draw it through the water to the other.

Not having a watch that shows seconds, in order to measure the time taken up by the boat in passing from end to end, I counted as fast as I could count to ten repeatedly, keeping an account of the number of tens on my fingers. And as much as possible to correct any little inequalities in my counting, I repeated the experiment a number of times at each depth of water, that I might take the medium. And the following are the results.

Water 1¼ inches deep.	2 inches.	4¼ inches.
1st exp. 100	94	79
2. 104	93	78
3. 104	91	77
4. 106	87	79
5. 100	88	79
6. 99	86	80
7. 100	90	79
8. 100	88	81
813	717	632
Medium 101	Medium 89	Medium 79

I made many other experiments, but the above are those in which I was most exact; and they serve sufficiently to show that the difference is considerable. Between the deepest and shallowest it appears to be somewhat more than one fifth. So that supposing large canals and boats and depths of water to bear the same proportions, and that four men or horses would draw a boat in deep water four leagues in four hours, it would require five to draw the same boat in the same time as far in shallow water; or four would require five hours.

Whether this difference is of consequence enough to justify a greater expense in deepening canals, is a matter of calculation, which our ingenious engineers in that way will readily determine.

B. FRANKLIN.

Alphonsus Le Roy, Paris.

Improvements in Navigation.—Read in the American Philosophical Society, December 2, 1785.

At sea, on board the London Packet, Capt. Truxton. August 1785.

Your learned writings on the navigation of the ancients, which contain a great deal of curious information, and your very ingenious contrivances for improving the modern sails (*voilure*) of which I saw with great pleasure a successful trial on the river Seine, have induced me to submit to your consideration and judgment, some thoughts I have had on the latter subject.

Those mathematicians, who have endeavoured to improve the swiftness of vessels, by calculating to find the form of least resistance, seem to have considered a ship as a body moving through one fluid only, the water; and to have given little attention to the circumstances of her moving through another fluid, the air. It is true that when a vessel sails right before the wind, this circumstance is of no importance, because the wind goes with her; but in every deviation from that course, the resistance of the air is something, and becomes greater in proportion as that deviation increases. I wave at present the consideration of those different degrees of resistance given by the air to that part of the hull which is above water, and confine myself to that given to the sails; for their motion through the air is resisted by the air, as the motion of the hull through the water is resisted by the water, though with less force, as the air is a lighter fluid. And to simplify the discussion as much as possible, I would state one situation only, to wit, that of the wind upon the beam, the ship's course being directly across the wind: and I would suppose the sail set in an angle of 45 degrees with the keel, as in the following figure; in the Plate, Fig 1.

A B represents the body of the vessel, C D the position of the sail, EEE the direction of the wind, MM the line of motion. In observing this figure it will appear, that so much of the body of the vessel as is immersed in the water must, to go forward, remove out of its way what water it meets with between the pricked lines FF. And the sail, to go forward, must move out of its way all the air its whole dimension meets with between the pricked lines CG and DG. Thus both the fluids give resistance to the motion, each in proportion to the quantity of matter contained in the dimensions to be removed. And though the air is vastly lighter than the water, and therefore more easily removed, yet the dimension being much greater its effect is very considerable.

It is true that in the case stated, the resistance given by the air between those lines to the motion of the sail is not apparent to the eye, because the greater force of the wind, which strikes it in the direction EEE, overpowers its effect and keeps the sail full in the curve a, a, a, a, a. But suppose the wind to cease, and the vessel in a calm to be impelled with the same swiftness by oars, the sail would then appear filled in the contrary curve b, b, b, b, b, when prudent men would immediately perceive, that the air resisted its motion, and would order it to be taken in.

Is there any possible means of diminishing this resistance, while the same quantity of sail is exposed to the action of the wind, and therefore the same force obtained from it? I think there is, and that it may be done by dividing the sail into a number of parts, and placing those parts in a line one behind the other; thus instead of one sail extending from C to D, figure 2, if four sails containing together the same quantity of canvass, were placed as in figure 3, each having one quarter of the dimensions of the great sail, and exposing a quarter of its surface to the wind, would give a quarter of its force; so that the whole force obtained from the wind would be the same, while the resistance from the air would be nearly reduced to the space between the pricked lines *a b* and *c d*, before the foremost sail.

It may perhaps be doubted whether the resistance from the air would be so diminished; since possibly each of the following small sails having also air before it, which must be removed, the resistance on the whole would be the same.

This is then a matter to be determined by experiment. I will mention one that I many years since made with success for another purpose; and I will propose another small one easily made. If that too succeeds, I should think it worth while to make a larger, though at some expense, on a river boat; and perhaps time, and the improvements experience will afford, may make it applicable with advantage to larger vessels.

Having near my kitchen chimney a round hole of eight inches diameter, through which was a constant steady current of air, increasing or diminishing only as the fire increased or diminished, I contrived to place my jack so as to receive the current; and taking off the flyers, I fixed in their stead on the same pivot a round tin plate of nearly the same diameter with the whole; and having cut it in radial lines almost to the centre, so as to have six equal vanes, I gave to each of them the obliquity of forty-five degrees. They moved round, without the weight, by the impression only of the current of air, but too slowly for the purpose of roasting. I suspected that the air struck by the back of each vane might possibly by its resistance retard the motion; and to try this, I cut each of them

nto two, and I placed the twelve, each having the same obliquity, in a line behind each other, when I perceived a great augmentation in its velocity, which encouraged me to divide them once more, and continuing the same obliquity, I placed the twenty-four behind each other in a line, when the force of the wind being the same, and the surface of vane the same, they moved round with much greater rapidity, and perfectly answered my purpose.

The second experiment that I propose, is to take two playing cards of the same dimensions, and cut one of them transversely into eight equal pieces; then with a needle string them upon two threads one near each end, and place them so upon the threads that, when hung up, they may be one exactly over the other, at a distance equal to their breadth, each in a horizontal position; and let a small weight, such as a bird-shot, be hung under them, to make them fall in a straight line when let loose. Suspend also the whole card by threads from its four corners, and hang to it an equal weight, so as to draw it downwards when let fall, its whole breadth pressing against the air. Let those two bodies be attached, one of them to one end of a thread a yard long, the other to the other end. Extend a twine under the cieling of a room, and put through it at thirty inches distance two pins bent in the form of fish-hooks. On these two hooks hang the two bodies, the thread that connects them extending parallel to the twine, which thread being cut, they must begin to fall at the same instant. If they take equal time in falling to the floor, it is a proof that the resistance of the air is in both cases equal. If the whole card requires a longer time, it shows that the sum of the resistances to the pieces of the cut card is not equal to the resistance of the whole one.*

This principle so far confirmed, I would proceed to make a larger experiment, with a shallop, which I would rig in this manner. Same plate, Fig. 4.

A B is a long boom, from which are hoisted seven jibs, a, b, c, d, e, f, g, each a seventh part of the whole dimensions, and as much more as will fill the whole space when set in an angle of forty-five degrees, so that they may lap when going before the wind, and hold more when going large. Thus rigged, when going right before the wind, the boom should be brought at right angles with the keel, by means of the sheet ropes C D, and all the sails hauled flat to the boom.

These positions of boom and sails to be varied as the wind quarters. But when the wind is on the beam, or when you would turn to windward, the boom is to be hauled right fore and aft, and the sails trimmed according as the wind is more or less against your course.

It seems to me that the management of a shallop so rigged would be very easy, the sails being run up and down separately, so that more or less sail may be made at pleasure; and I imagine, that there being full as much sail exposed to the force of the wind which impels the vessel in its course, as if the whole were in one piece, and the resistance of the dead air against the foreside of the sail being diminished, the advantage of swiftness would be very considerable; besides that the vessel would lie nearer the wind.

Since we are on the subject of improvements in navigation, permit me to detain you a little longer with a small relative observation. Being, in one of my voyages, with ten merchant-ships under convoy of a frigate at anchor in Torbay, waiting for a wind to go to the westward; it came fair, but brought in with it a considerable swell. A signal was given for weighing, and we put to sea altogether; but three of the ships left their anchors, their cables parting just as their anchors came a-peak. Our cable held, and we got up our anchor; but the shocks the ship felt before the anchor got loose from the ground, made me reflect on what might possibly have caused the breaking of the other cables; and I imagined it might be the short bending of the cable just without the hause-hole, from a horizontal to an almost verticle position, and the sudden violent jerk it receives by the rising of the head of the ship on the swell of a wave while in that position. For example, suppose a vessel hove up so as to have her head nearly over her anchor, which still keeps its hold perhaps in a tough bottom; if it were calm, the cable still out would form nearly a perpendicular line, measuring the distance between the hause-hole and the anchor; but if there is a swell, her head in the trough of the sea will fall below the level, and when lifted on the wave will be much above it. In the first case the cable will hang loose, and bend perhaps as in figure 5. In the second case, figure 6, the cable will be drawn straight with a jerk, must sustain the whole force of the rising ship, and must either loosen the anchor, resist the rising force of the ship, or break. But why does it break at the hause-hole?

Let us suppose it a cable of three inches diameter, and represented by figure 7. If this cable is to be bent round the corner A, it is evident that either the part of the triangle contained between the letters a, b, c, must stretch considerably, and those most that are nearest the surface; or that the parts between d, e, f, must be compressed; or both, which most probably happens. In this case the lower half of the thickness affords no strength against the jerk, it not being strained, the upper half bears the whole, and the yarns

* The motion of the vessel made it inconvenient to try this simple experiment at sea, when the proposal of it was written. But it has been tried since we came on shore, and succeeded as the other.

near the upper surface being first and most strained, break first, and the next yarns follow; for in this bent situation they cannot bear the strain altogether, and each contributes its strength to the whole, as they do when the cable is strained in a straight line.

To remedy this, methinks it would be well to have a kind of large pulley wheel, fixed in the hause-hole, suppose of two feet diameter, over which the cable might pass; and being there bent gradually to the round of the wheel, would thereby be more equally strained, and better able to bear the jerk, which may save the anchor, and by that means in the course of the voyage to save the ship.

One maritime observation more shall finish this letter. I have been a reader of newspapers now near seventy years, and I think few years pass without an account of some vessel met with at sea, with no living soul on board, and so many feet of water in her hold, which vessel has nevertheless been saved and brought into port: and when not met with at sea, such forsaken vessels have often come ashore on some coast. The crews, who have taken to their boats and thus abandoned such vessels, are sometimes met with and taken up at sea by other ships, sometimes reach a coast, and are sometimes never heard of. Those that give an account of quitting their vessels generally say, that she sprung a leak, that they pumped for some time, that the water continued to rise upon them, and that, despairing to save her, they had quitted her lest they should go down with her. It seems by the event that this fear was not always well founded, and I have endeavoured to guess at the reason of the people's too hasty discouragement.

When a vessel springs a leak near her bottom, the water enters with all the force given by the weight of the column of water, without, which force is in proportion to the difference of level between the water without and that within. It enters therefore with more force at first and in greater quantity, than it can afterwards when the water within is higher.—The bottom of the vessel too is narrower, so that the same quantity of water coming into that narrow part, rises faster than when the space for it to flow is larger. This helps to terrify. But as the quantity entering is less and less as the surfaces without and within become more nearly equal in height, the pumps that could not keep the water from rising at first, might afterwards be able to prevent its rising higher, and the people might have remained on board in safety, without hazarding themselves in an open boat on the wide ocean. (Fig. 8.)

Besides the greater equality in the height of the two surfaces, there may sometimes be other causes that retard the farther sinking of a leaky vessel. The rising water within may arrive at quantities of light wooden work, empty chests, and particularly empty water-casks, which if fixed so as not to float themselves may help to sustain her. Many bodies which compose a ship's cargo may be specifically lighter than water, all these when out of water are an additional weight to that of the ship, and she is in proportion pressed deeper into the water; but as soon as these bodies are immersed, they weigh no longer on the ship, but on the contrary, if fixed, they help to support her, in proportion as they are specifically lighter than the water. And it should be remembered, that the largest body of a ship may be so balanced in the water, that an ounce less or more of weight may leave her at the surface or sink her to the bottom. There are also certain heavy cargoes, that, when the water gets at them, are continually dissolving, and thereby lightning the vessel, such as salt and sugar. And as to water-casks mentioned above, since the quantity of them must be great in ships of war where the number of men consume a great deal of water every day, if it had been made a constant rule to bung them up as fast as they were emptied, and to dispose the empty casks in proper situations, I am persuaded that many ships which have been sunk in engagements, or have gone down afterwards, might with the unhappy people have been saved; as well as many of those which in the last war foundered, and were never heard of. While on this topic of sinking, one cannot help recollecting the well known practice of the Chinese, to divide the hold of a great ship into a number of separate chambers by partitions tight caulked (of which you gave a model in your boat upon the Seine) so that if a leak should spring in one of them the others are not effected by it; and though that chamber should fill to a level with the sea, it would not be sufficient to sink the vessel.—We have not imitated this practice. Some little disadvantage it might occasion in the stowage is perhaps one reason, though that I think might be more than compensated by an abatement in the insurance that would be reasonable, and by a higher price taken of passengers, who would rather prefer going in such a vessel. But our sea-faring people are brave, despise danger, and reject such precautions of safety, being cowards only in one sense, that of *fearing* to be *thought afraid*.

I promised to finish my letter with the last observation, but the garrulity of the old man has got hold of me, and as I may never have another occasion of writing on this subject, I think I may as well now, once for all, empty my nauticle budget, and give you all the thoughts that have in my various long voyages occurred to me relating to navigation. I am sure that in you they will meet a can-

did judge, who will excuse my mistakes on account of my good intention.

There are six accidents that may occasion the loss of ships at sea. We have considered one of them, that of foundering by a leak.—The other five are, 1. Oversetting by sudden flaws of wind, or by carrying sail beyond the bearing. 2. Fire by accident or carelessness. 3. A heavy stroke of lightning, making a breach in the ship, or firing the powder. 4. Meeting and shocking with other ships in the night. 5. Meeting in the night with islands of ice.

To that of oversetting, privateers in their first cruize have, as far as has fallen within my knowledge or information, been more subject than any other kind of vessels. The double desire of being able to overtake a weaker flying enemy, or to escape when pursued by a stronger, has induced the owners to overmast their cruizers, and to spread too much canvas; and the great number of men, many of them not seamen, who being upon deck when a ship heels suddenly are huddled down to leeward, and increase by their weight the effect of the wind. This therefore should be more attended to and guarded against, especially as the advantage of lofty masts is problematical. For the upper sails have greater power to lay a vessel more on her side, which is not the most advantageous position for going swiftly through the water. And hence it is that vessels, which have lost their lofty masts, and been able to make little more sail afterwards than permitted the ship to sail upon an even keel, have made so much way, even under jury masts, as to surprise the mariners themselves. But there is besides, something in the modern form of our ships that seems as if calculated expressly to allow their oversetting more easily. The sides of a ship, instead of spreading out as they formerly did in the upper works, are of late years turned in, so as to make the body nearly round, and more resembling a cask. I do not know what the advantages of this construction are, except that such ships are not easily boarded. To me it seems a contrivance to have less room in a ship at nearly the same expense. For it is evident that the same timber and plank consumed in raising the sides from a to b, and from d to c, would have raised them from a to e, and from d to f, fig. 9. In this form all the spaces between e, a, b, and c, d, f, would have been gained, the deck would have been larger, the men would have had more room to act, and not have stood so thick in the way of the enemy's shot; and the vessel, the more she was laid down on her side, the more bearing she would meet with, and more effectual to support her, as being farther from the centre. Whereas in the present form, her ballast makes the chief part of her bearing, without which she would turn in the sea almost as easily as a barrel. More ballast by this means becomes necessary, and that sinking a vessel deeper in the water occasions more resistance to her going through it. The Bermudian sloops still keep with advantage to the old spreading form. The islanders in the great Pacific ocean, though they have no large ships, are the most expert boat-sailors in the world, navigating that sea safely with their proas, which they prevent oversetting by various means. Their sailing proas for this purpose have outriggers, generally to windward, above the water, on which, one or more men are placed, to move occasionally further from or nearer to the vessel as the wind freshens or slackens. But some have their outriggers to leeward, which, resting on the water, support the boat so as to keep her upright when pressed down by the wind. Their boats moved by oars or rather paddles, are for long voyages, fixed two together by cross bars of wood that keep them at some distance from each other, and so render their oversetting next to impossible. How far this may be practicable in larger vessels, we have not yet sufficient experience. I know of but one trial made in Europe, which was about one hundred years since, by Sir Wm. Petty. He built a double vessel, to serve as a packet boat between England and Ireland. Her model still exists in the museum of the Royal Society, where I have seen it. By the accounts we have of her, she answered well the purpose of her construction, making several voyages; and though wrecked at last by a storm, the misfortune did not appear owing to her particular construction, since many other vessels of the common form wrecked at the same time. The advantage of such a vessel is, that she needs no ballast, therefore swims either lighter or will carry more goods; and that passengers are not so much incommoded by her rolling: to which may be added that if she is to defend herself by her cannon, they will probably have more effect, being kept more generally in a horizontal position, than those in common vessels. I think, however, that it would be an improvement of that model, to make the sides which are opposed to each other perfectly parallel, though the other sides are formed as in common, thus, figure 10.

The building of a double ship would indeed be more expensive in proportion to her burden; and that perhaps is sufficient to discourage the method.

The accident of fire is generally well guarded against by the prudent captain's strict orders against smoking between decks, or carrying a candle there out of a lantern. But there is one dangerous practice which frequent terrible accidents have not yet been sufficient to abolish; that of carrying store-spirits to sea in casks. Two large ships, the

Serapis and the Duke of Athol, one an East-Indiaman, the other a frigate, have been burnt within these two last years, and many lives miserably destroyed, by drawing spirits out of a cask near a candle. It is high time to make it a general rule, that all the ship's store of spirits should be carried in bottles.

The misfortune by a stroke of lightning I have in my former writings endeavoured to show a method of guarding against, by a chain and pointed rod, extending, when run up, from above the top of the mast to the sea. These instruments are now made and sold at a reasonable price by Nairne & Co. in London, and there are several instances of success attending the use of them. They are kept in a box, and may be ran up and fixed in about five minutes, on the apparent approach of a thunder gust.

Of the meeting and shocking with other ships in the night I have known two instances in voyages between London and America. In one both ships arrived though much damaged, each reporting their belief that the other must have gone to the bottom. In the other, only one got to port; the other was never afterwards heard of. These instances happened many years ago, when the commerce between Europe and America was not a tenth part of what it is at present, ships of course thinner scattered, and the chance of meeting proportionably less. It has long been the practice to keep a *look-out before* in the channel, but at sea it has been neglected. If it is not at present thought worth while to take that precaution, it will in time become of more consequence; since the number of ships at sea is continually augmenting. A drum frequently beat, or a bell rung in a dark night, might help to prevent such accidents.

Islands of ice are frequently seen off the banks of Newfoundland, by ships going between North America and Europe. In the day time they are easily avoided, unless in a very thick fog. I remember two instances of ships running against them in the night. The first lost her bowspirit, but received little other damage. The other struck where the warmth of the sea had wasted the ice next to it, and a part hung over above. This perhaps saved her, for she was under great way; but the upper part of the cliff taking her foretopmast, broke the shock, though it carried away the mast. She disengaged herself with some difficulty, and got safe into port; but the accident shows the possibility of other ships being wrecked and sunk by striking those vast masses of ice, of which I have seen one that we judged to be seventy feet high above the water, consequently eight times as much under water; and it is another reason for keeping a good *look-out before*, though far from any coast that may threaten danger.

It is remarkable, that the people we consider as savages have improved the art of sailing and rowing boats in several points beyond what we can pretend to. We have no sailing-boats equal to the flying proas of the South Seas, no rowing or paddling-boat equal to that of the Greenlanders for swiftness and safety. The birch canoes of the North-American Indians have also some advantageous properties. They are so light that two men may carry one of them over land, which is capable of carrying a dozen upon the water; and in heeling they are not so subject to take in water as our boats, the sides of which are lowest in the middle where it is most likely to enter, this being highest in that part, as in figure 11.

The Chinese are an enlightened people, the most anciently civilized of any existing, and their arts are ancient, a presumption in their favour: their method of rowing their boats differs from us, the oars being worked either two a-stern as we scull, or on the sides with the same kind of motion, being hung parallel to the keel on a rail, and always acting in the water, not perpendicular to the side as ours are, nor lifted out at every stroke, which is a loss of time, and the boat in the interval loses motion. They see our manner, and we theirs, but neither are disposed to learn of or copy the other.

To the several means of moving boats mentioned above, may be added the singular one lately exhibited at Javelle, on the Seine below Paris, where a clumsy boat was moved across that river in three minutes by rowing, not in the water, but in the air, that is, by whirling round a set of windmill vanes fixed to a horizontal axis, parallel to the keel, and placed at the head of the boat. The axis was bent into an elbow at the end, by the help of which it was turned by one man at a time. I saw the operation at a distance. The four vanes appeared to be about five feet long, and perhaps two and a half wide. The weather was calm. The labour appeared to be great for one man, as the two several times relieved each other. But the action upon the air by the oblique surfaces of the vanes must have been considerable, as the motion of the boat appeared tolerably quick going and returning; and she returned to the same place from whence she first set out, notwithstanding the current. This machine is since applied to the moving of air-balloons: an instrument similar may be contrived to move a boat by turning under water.

Several mechanical projectors have at different times proposed to give motion to boats, and even to ships, by means of circular rowing, or paddles placed on the circumference of wheels to be turned constantly on each side of the vessel; but this method, though frequently tried, has never been found so effectual as to encourage a continuance of the practice. I do not know that the reason has

hitherto been given. Perhaps it may be this, that great part of the force employed contributes little to the motion. For instance, (fig. 12) of the four paddles a, b, c, d, all under water, and turning to move a boat from X to Y, c has the most power, b nearly though not quite as much, their motion being nearly horizontal; but the force employed in moving a, is consumed in pressing almost downright upon the water till it comes to the place of b; and the force employed in moving d is consumed in lifting the water till d arrives at the surface; by which means much of the labour is lost. It is true, that by placing the wheels higher out of the water, this waste labour will be diminished in a calm, but where a sea runs, the wheels must unavoidably be often dipt deep in the waves, and the turning of them thereby rendered very laborious to little purpose.

Among the various means of giving motion to a boat, that of M. Bernoulli appears one of the most singular, which was to have fixed in the boat a tube in the form of an L, the upright part to have a funnel-kind of opening at top, convenient for filling the tube with water; which, descending and passing through the lower horizontal part, and issuing in the middle of the stern, but under the surface of the river, should push the boat forward. There is no doubt that the force of the descending water would have a considerable effect, greater in proportion to the height from which it descended; but then it is to be considered, that every bucket full pumped or dipped up into the boat, from its side or through its bottom, must have its *viz inertiæ* overcome so as to receive the motion of the boat, before it can come to give motion by its descent; and that will be a deduction from the moving power. To remedy this, I would propose the addition of another such L pipe, and that they should stand back to back in the boat thus, figure 13, the forward one being worked as a pump, and sucking in the water at the head of the boat, would draw it forward while pushed in the same direction by the force at the stern. And after all it should be calculated whether the labour of pumping would be less than that of rowing. A fire-engine might possibly in some cases be applied in this operation with advantage.

Perhaps this labour of raising water might be spared, and the whole force of a man applied to the moving of a boat by the use of air instead of water; suppose the boat constructed in this form, figure 14. A, a tube round or square, of two feet diameter, in which a piston may move up and down. The piston to have valves in it, opening inwards, to admit air when the piston rises; and shutting, when it is forced down by means of the lever B turning on the centre C. The tube to have a valve D, to open when the piston is forced down, and let the air pass out at E, which striking forcibly against the water abaft must push the boat forward. If there is added an air vessel F properly valved and placed, the force would continue to act while a fresh stroke is taken with the lever. The boatman might stand with his back to the stern, and putting his hands behind him, work the motion by taking hold of the cross bar at B, while another should steer; or if he had two such pumps, one on each side of the stern, with a lever for each hand, he might steer himself by working occasionally more or harder with either hand, as watermen now do with a pair of sculls. There is no position in which the body of a man can exert more strength than in pulling right upwards. To obtain more swiftness, greasing the bottom of a vessel is sometimes used, and with good effect. I do not know that any writer has hitherto attempted to explain this. At first sight one would imagine, that though the friction of a hard body, sliding on another hard body, and the resistance occasioned by that friction, might be diminished by putting grease between them, yet that a body sliding on a fluid, such as water, should have no need of, nor receive any advantage from such greasing. But the fact is not disputed. And the reason perhaps may be this—The particles of water have a mutual attraction, called the attraction of adhesion. Water also adheres to wood, and to many other substances, but not to grease: on the contrary they have a mutual repulsion, so that it is a question whether when oil is poured on water, they ever actually touch each other; for a drop of oil upon water, instead of sticking to the spot where it falls, as it would if it fell on a looking-glass, spreads instantly to an immense distance in a film extremely thin, which it could not easily do if it touched and rubbed or adhered even in a small degree to the surface of the water. Now the adhesive force of water to itself, and to other substances, may be estimated from the weight of it necessary to separate a drop, which adheres, while growing, till it has weight enough to force the separation and break the drop off. Let us suppose the drop to be the size of a pea, then there will be as many of these adhesions as there are drops of that size touching the bottom of a vessel, and these must be broken by the moving power, every step of her motion that amounts to a drop's breadth: and there being no such adhesions to break between the water and a greased bottom, may occasion the difference.

So much respecting the motion of vessels. But we have sometimes occasion to stop their motion; and if a bottom is near enough we can cast anchor: where there are no soundings, we have as yet no means to prevent driving in a storm, but by lying-to, which still permits driving at the rate of about two miles

an hour; so that in a storm continuing fifty hours, which is not an uncommon case, the ship may drive one hundred miles out of her course; and should she in that distance meet with a lee shore, she may be lost.

To prevent this driving to leeward in deep water, a swimming anchor is wanting, which ought to have these properties.

1. It should have a surface so large as, being at the end of a hauser in the water, and placed perpendicularly, should hold so much of it, as to bring the ship's head to the wind, in which situation the wind has least power to drive her.

2. It should be able by its resistance to prevent the ship's receiving way.

3. It should be capable of being situated below the heave of the sea, but not below the undertow.

4. It should not take up much room in the ship.

5. It should be easily thrown out, and put into its proper situation.

6. It should be easy to take in again, and stow away.

An ingenious old mariner, whom I formerly knew, proposed, as a swimming anchor for a large ship, to have a stem of wood twenty-five feet long and four inches square, with four boards of 18, 16, 14 and 12 feet long, and one foot wide, the boards to have their substance thickened several inches in the middle by additional wood, and to have each a four inch square hole through its middle, to permit its being slipt on occasionally upon the stem, and at right angles with it; where all being placed and fixed at four feet distance from each other, it would have the appearance of the old mathematical instrument called a forestaff. This thrown into the sea, and held by a hauser veered out at some length, he conceived would bring a vessel up, and prevent her driving, and when taken in might be stowed away by separating the boards from the stem. (Figure 15.) Probably such a swimming anchor would have some good effect, but it is subject to this objection, that laying on the surface of the sea, it is liable to be hove forward by every wave, and thereby give so much leave for the ship to drive.

Two machines for this purpose have occurred to me, which, though not so simple as the above, I imagine would be more effectual, and more easily manageable. I will endeavour to describe them, that they may be submitted to your judgment, whether either would be serviceable; and if they would, to which we should give the preference.

The first is to be formed, and to be used in the water on almost the same principles with those of a paper kite used in the air. Only as the paper kite rises in the air, this is to descend in the water. Its dimensions will be different for ships of different size.

To make one of suppose fifteen feet high; take a small spar of that length for the backbone, A B, figure 16, a smaller of half that length C D, for the cross piece. Let these be united by a bolt at E, yet so as that by turning on the bolt they may be laid parallel to each other. Then make a sail of strong canvas, in the shape of figure 17. To form this, without waste of sail-cloth, sew together pieces of the proper length, and for half the breadth, as in figure 18, then cut the whole in the diagonal lines a, b, c, and turn the piece F so as to place its broad part opposite to that of the piece G, and the piece H in like manner opposite to I, which when all sewed together will appear as in fig. 17. This sail is to be extended on the cross of fig. 16, the top and bottom points well secured to the ends of the long spar; the two side points d, e, fastened to the ends of two cords, which coming from the angle of the loop (which must be similar to the loop of a kite) pass through two rings at the ends of the short spar, so as that on pulling upon the loop the sail will be drawn to its extent. The whole may, when aboard, be furled up, as in figure 19, having a rope from its broad end, to which is tied a bag of ballast for keeping that end downwards when in the water, and at the other end another rope with an empty keg at its end to float on the surface; this rope long enough to permit the kite's descending into the undertow, or if you please lower into still water. It should be held by a hauser. To get it home easily, a small loose rope may be veered out with it, fixed to the keg. Hauling on that rope will bring the kite home with small force, the resistance being small, as it will then come end ways.

It seems probable that such kite at the end of a long hauser would keep a ship with her head to the wind, and, resisting every tug, would prevent her driving so fast as when her side is exposed to it, and nothing to hold her back. If only half the driving is prevented, so as that she moves but fifty miles instead of the hundred during a storm, it may be some advantage, both in holding so much distance as is saved, and in keeping from a lee-shore. If single canvas should not be found strong enough to bear the tug without splitting, it may be doubled, or strengthened by a netting behind it, represented by figure 20.

The other machine for the same purpose, is to be made more in the form of an umbrella, as represented, figure 21. The stem of the umbrella, a square spar of proper length, with four moveable arms, of which two are represented C, C, figure 22. These arms to be fixed in four joint cleats, as D, D, &c. one on each side of the spar, but so as that the four arms may open by turning on a pin in the joint. When open they form a cross, on which a four-square canvas sail is to be extended,

its corners fastened to the ends of the four arms. Those ends are also to be stayed by ropes fastened to the stem or spar, so as to keep them short of being at right angles with it: and to the end of one of the arms should be hung the small bag of ballast, and to the end of the opposite arm the empty keg. This, on being thrown into the sea, would immediately open; and when it had performed its function, and the storm over, a small rope from its other end being pulled on, would turn it, close it, and draw it easily home to the ship. This machine seems more simple in its operation, and more easily manageable than the first, and perhaps may be as effectual.*

Vessels are sometimes retarded, and sometimes forwarded in their voyages, by currents at sea, which are often not perceived. About the year 1769, or 70, there was an application made by the board of customs at Boston, to the lords of the treasury in London, complaining that the packets between Falmouth and New York, were generally a fortnight longer in their passages, than merchant-ships from London to Rhode-Island, and proposing that for the future they should be ordered to Rhode-Island instead of New York. Being then concerned in the management of the American post-office, I happened to be consulted on the occasion; and it appearing strange to me that there should be such a difference between two places, scarce a day's run asunder, especially when the merchant-ships are generally deeper laden, and more weakly manned than the packets, and had from London the whole length of the river and channel to run before they left the land of England, while the packets had only to go from Falmouth, I could not but think the fact misunderstood or misrepresented. There happened then to be in London a Nantucket sea-captain of my acquaintance, to whom I communicated the affair. He told me he believed the fact might be true; but the difference was owing to this, that the Rhode-Island captains were acquainted with the gulf stream, which those of the English packets were not. We are well acquainted with that stream, says he, because in our pursuit of whales, which keep near the sides of it, but are not to be met with in it, we run down along the sides, and frequently cross it to change our side: and in crossing it have sometimes met and spoke with those packets, who were in the middle of it, and stemming it. We have informed them that they were stemming a current, that was against them to the value of three miles an hour; and advised them to cross it and get out of it; but they were too wise to be counselled by simple American fishermen. When the winds are but light, he added, they are carried back by the current more than they are forwarded by the wind: and if the wind be good, the subtraction of 70 miles a day from their course is of some importance. I then observed it was a pity no notice was taken of this current upon the charts, and requested him to mark it out for me, which he readily complied with, adding directions for avoiding it in sailing from Europe to North America. I procured it to be engraved by order from the general post-office, on the old chart of the Atlantic, at Mount and Page's Tower-hill; and copies were sent down to Falmouth for the captains of the packets, who slighted it however; but it is since printed in France, of which edition I hereto annex a copy.*

This stream is probably generated by the great accumulation of water on the eastern coast of America between the tropics, by the trade-winds which constantly blow there. It is known that a large piece of water ten miles broad and generally only three feet deep, has by a strong wind had its waters driven to one side and sustained so as to become six feet deep, while the windward side was laid dry. This may give some idea of the quantity heaped up on the American coast, and the reason of its running down in a strong current through the islands into the bay of Mexico, and from thence issuing through the gulf of Florida, and proceeding along the coast to the banks of Newfoundland, where it turns off towards and runs down through the Western Islands. Having since crossed this stream several times in passing between America and Europe, I have been attentive to sundry circumstances relating to it, by which to know when one is in it; and besides the gulph weed with which it is interspersed, I find that it is always warmer than the sea on each side of it, and that it does not sparkle in the night: I annex hereto the observations made with the thermometer in two voyages, and possibly may add a third. It will appear from them, that the thermometer may be an useful instrument to a navigator, since currents coming from the northward into southern seas, will probably be found colder than the water of those seas, as the currents from southern seas into northern are found warmer. And it is not to be wondered that so vast a body of deep warm water, several leagues wide, coming from between the tropics and issuing out of the gulph into the northern seas, should retain its warmth longer than the twenty or thirty days required to its passing the banks of Newfoundland. The quantity is too great, and it is too deep to be suddenly cooled by passing under a cooler air. The air immedi-

* Captain Truxton, on board whose ship this was written, has executed this proposed machine; he has given six arms to the umbrella, they are joined to the stem by iron hinges, and the canvas is double. He has taken it with him to China. February, 1786.

* The map in this edition has been constructed so as to embrace in one view, the theory of the Gulf Stream and the theory of the migration of fish; some attention has been paid also to Volney's suggestions on the subject of the Gulf Stream. See the plate.

ately over it, however, may receive so much warmth from it as to be rarefied and rise, being rendered lighter than the air on each side of the stream; hence those airs must flow in to supply the place of the rising warm air, and, meeting with each other, form those tornadoes and water-spouts frequently met with, and seen near and over the stream; and as the vapour from a cup of tea in a warm room and the breath of an animal in the same room, are hardly visible, but become sensible immediately when out in the cold air, so the vapour from the gulph stream, in warm latitudes is scarcely visible, but when it comes into the cool air from Newfoundland, it is condensed into the fogs, for which those parts are so remarkable.

The power of wind to raise water above its common level in the sea is known to us in America, by the high tides occasioned in all our sea-ports when a strong north-easter blows against the gulph stream.

The conclusion from these remarks is, that a vessel from Europe to North America may shorten her passage by avoiding to stem the stream, in which the thermometer will be very useful; and a vessel from America to Europe may do the same by the same means of keeping in it. It may have often happened accidentally, that voyages have been shortened by these circumstances. It is well to have the command of them.

But may there not be another cause, independent of winds and currents, why passages are generally shorter from America to Europe than from Europe to America? This question I formerly considered in the following short paper.

On board the Pennsylvania Packet, Captain Osborne.

At Sea, April 5, 1775.

"SUPPOSE a ship to make a voyage eastward from a place in lat. 40° north, to a place in lat. 50° north, distance in longitude 75 degrees.

"In sailing from 40 to 50, she goes from a place where a degree of longitude is about eight miles greater than in the place she is going to. A degree is equal to four minutes of time; consequently the ship in the harbour she leaves, partaking of the diurnal motion of the earth, moves two miles in a minute faster than when in the port she is going to; which is 120 miles in an hour.

"This motion in a ship and cargo is of great force, and if she could be lifted up suddenly from the harbour in which she lay quiet, and set down instantly in the latitude of the port she was bound to, though in a calm, that force contained in her would make her run a great way at a prodigious rate. This force must be lost gradually in her voyage, by gradual impulse against the water, and probably thence shorten the voyage. Query, In returning does the contrary happen, and is her voyage thereby retarded and lengthened?"*

Would it not be a more secure method of planking ships, if, instead of thick single planks laid horizontally, we were to use planks of half the thickness, and lay them double and across each other as in figure 23? To me it seems that the difference of expense would not be considerable, and that the ship would be both tighter and stronger.

The securing of the ship is not the only necessary thing; securing the health of the sailors, a brave and valuable order of men, is likewise of great importance. With this view the methods so successfully practised by captain Cook in his long voyages cannot be too closely studied or carefully imitated. A full account of those methods is found in sir John Pringle's speech, when the medal of the Royal Society was given to that illustrious navigator. I am glad to see in his last voyage that he found the means effectual which I had proposed for preserving flour, bread, &c. from moisture and damage. They were found dry and good after being at sea four years. The method is described in my printed works, page 452, fifth edition. In the same, page 469, 470,† is proposed a means of allaying thirst in case of want of fresh water. This has since been practised in two instances with success. Happy if their hunger, when the other provisions are consumed, could be relieved as commodiously; and perhaps in time this may be found not impossible. An addition might be made to their present vegetable provision, by drying various roots in slices by the means of an oven. The sweet potatoe of America and Spain is excellent for this purpose. Other potatoes, with carrots, parsnips, and turnips, might be prepared and preserved in the same manner

With regard to make-shifts in cases of necessity, seamen are generally very ingenious themselves. They will excuse, however, the mention of two or three. If they happen in any circumstance, such as after shipwreck, taking to their boat, or the like, to want a compass, a fine sewing-needle laid on clear water in a cup will generally point to the north, most of them being a little magnetical, or may be made so by being strongly rubbed or hammered, lying in a north and south direction. If their needle is too heavy to float by itself, it may be supported by little pieces of cork or wood. A man who can swim, may be aided in a long traverse by his handkerchief formed into a kite, by two cross sticks extending to the four corners; which, being raised in the air when the wind is fair and fresh,

* Since this paper was read at the Society, an ingenious member, Mr. Patterson, has convinced the writer that the returning voyage would not, from this cause, be retarded.

† See the Paper referred to in this volume, page 358.

will tow him along while lying on his back. Where force is wanted to move a heavy body, and there are but few hands and no machines, a long and strong rope may make a powerful instrument. Suppose a boat is to be drawn up on a beach, that she may be out of the surf; a stake drove into the beach where you would have the boat drawn, and another to fasten the end of the rope to, which comes from the boat, and then applying what force you have to pull upon the middle of the rope at right angles with it, the power will be augmented in proportion to the length of rope between the posts. The rope being fasted to the stake A, and drawn upon in the direction C D, will slide over the stake B; and when the rope is bent to the angle A D B, represented by the pricked line in figure 24, the boat will be at B.

Some sailors may think the writer has given himself unnecessary trouble in pretending to advise them; for they have a little repugnance to the advice of landmen, whom they esteem ignorant and incapable of giving any worth notice; though it is certain that most of their instruments were the invention of landmen. At least the first vessel ever made to go on the water was certainly such. I will therefore add only a few words more, and they shall be addressed to passengers.

When you intend a long voyage, you may do well to keep your intention as much as possible a secret, or at least the time of your departure; otherwise you will be continually interrupted in your preparations by the visits of friends and acquaintance, who will not only rob you of the time you want, but put things out of your mind, so that when you come to sea, you have the mortification to recollect points of business that ought to have been done, accounts you intended to settle, and conveniences you had proposed to bring with you, &c. all which have been omitted through the effect of these officious friendly visits. Would it not be well if this custom could be changed; if the voyager after having, without interruption, made all his preparations, should use some of the time he has left, in going himself, to take leave of his friends at their own houses, and let them come to congratulate him on his happy return.

It is not always in your power to make a choice in your captain, though much of your comfort in the passage may depend on his personal character, as you must for so long a time be confined to his company, and under his direction; if he is a sensible, sociable, good natured, obliging man, you will be so much the happier. Such there are; but if he happens to be otherwise, and is only skilful, careful, watchful, and active in the conduct of his ship, excuse the rest, for these are the essentials.

Whatever right you may have by agreement in the mass of stores laid in by him for the passengers, it is good to have some particular things in your own possession, so as to be always at your own command.

1. Good water, that of the ship being often bad. You can be sure of having it good only by bottling it from a clear spring or well and in clean bottles. 2. Good tea. 3. Coffee ground. 4. Chocolate. 5. Wine of the sort you particularly like, and cyder. 6. Raisins. 7. Almonds. 8. Sugar. 9. Capillaire. 10. Lemons. 11. Jamaica spirits. 12. Eggs greased. 13. Diet bread. 14. Portable soup. 15. Rusks. As to fowls, it is not worth while to have any called yours, unless you could have the feeding and managing of them according to your own judgment under your own eye. As they are generally treated at present in ships, they are for the most part sick, and their flesh tough and hard as whitleather. All seamen have an opinion, broached I supposed at first prudently, for saving of water when short, that fowls do not know when they have drank enough, and will kill themselves if you give them too much, so they are served with a little only once in two days. This poured into troughs that lie sloping, and therefore immediately runs down to the lower end. There the fowls ride upon one another's backs to get at it, and some are not happy enough to reach and once dip their bills in it. Thus tantalized, and tormented with thirst, they cannot digest their dry food, they fret, pine, sicken, and die. Some are found dead, and thrown overboard every morning, and those killed for the table are not eatable. Their troughs should be in little divisions, like cups, to hold the water separately, figure 25. But this is never done. The sheep and hogs are therefore your best dependence for fresh meat at sea, the mutton being generally tolerable, and the pork excellent.

It is possible your captain may have provided so well in the general stores, as to render some of the particulars above recommended of little or no use to you. But there are frequently in the ship poorer passengers, who are taken at a lower price, lodge in the steerage, and have no claim to any of the cabin provisions, or to any but those kinds that are allowed the sailors. These people are sometimes dejected, sometimes sick, there may be women and children among them. In a situation where there is no going to market, to purchase such necessaries, a few of these your superfluities distributed occasionally may be of great service, restore health, save life, make the miserable happy, and thereby afford you infinite pleasure.

The worst thing in ordinary merchant ships is the cookery. They have no professed cook, and the worst hand as a seaman is appointed to that office, in which he is not only

very ignorant but very dirty. The sailors have therefore for a saying, that *God sends meat and the devil cooks.* Passengers more piously disposed, and willing to believe Heaven orders all things for the best, may suppose, that, knowing the sea-air and constant exercise by the motion of the vessel would give us extraordinary appetites, bad cooks were kindly sent to prevent our eating too much; or that, foreseeing we should have bad cooks, good appetites were furnished to prevent our starving. If you cannot trust to these circumstances, a spirit-lamp, with a blaze-pan, may enable you to cook some little things for yourself; such as a hash, a soup, &c. And it might be well also to have among your stores some potted meats, which if well put up will keep long good. A small tin oven, to place with the open side before the fire, may be another good utensil in which your own servant may roast for you a bit of pork or mutton. You will sometimes be induced to eat of the ship's salt beef, as it is often good. You will find cider the best quencher of that thirst which salt meat or fish occasions. The ship biscuit is too hard for some sets of teeth. It may be softened by toasting. But rusk is better; for being made of good fermented bread, sliced and baked a second time, the pieces imbibe the water easily, soften immediately, digest more kindly, and are therefore more wholesome than the unfermented biscuit. By the way, rusk is the true original biscuit, so prepared to keep for sea, *biscuit* in French signifying twice baked. If your dry peas boil hard, a two-pound iron shot put with them into the pot, will by the motion of the ship grind them as fine as mustard.

The accidents I have seen at sea with large dishes of soup upon a table, from the motion of the ship, have made me wish, that our potters or pewterers would make soup dishes in divisions, like a set of small bowls united together, each containing about sufficient for one person, in some such form as fig. 26; for then when the ship should make a sudden heel, the soup would not in a body flow over one side, and fall into people's laps and scald them, as is sometimes the case; but would be retained in the separate divisions, as in figure 27.

After these trifles, permit the addition of a few general reflections. Navigation, when employed in supplying necessary provisions to a country in want, and thereby preventing famines, which were more frequent and destructive before the invention of that art, is undoubtedly a blessing to mankind. When employed merely in transporting superfluities, it is a question whether the advantage of the employment it affords is equal to the mischief of hazarding so many lives on the ocean. But when employed in pillaging merchants and transporting slaves, it is clearly the means of augmenting the mass of human misery. It is amazing to think of the ships and lives risked in fetching tea from China, coffee from Arabia, sugar and tobacco from America, all which our ancestors did well without. Sugar employs near one thousand ships, tobacco almost as many. For the utility of tobacco there is little to be said; and for that of sugar, how much more commendable would it be if we could give up the few minutes gratification afforded once or twice a day by the taste of sugar in our tea, rather than encourage the cruelties exercised in producing it. An eminent French moralist says, that when he considers the wars we excite in Africa to obtain slaves, the numbers necessarily slain in those wars, the many prisoners who perish at sea by sickness, bad provisions, foul air, &c. in the transportation, and how many afterwards die from the hardships of slavery, he cannot look on a piece of sugar without conceiving it stained with spots of human blood! had he added the consideration of the wars we make to take and retake the sugar islands from one another, and the fleets and armies that perish in those expeditions, he might have seen his sugar not merely spotted, but thoroughly dyed scarlet in grain. It is these wars that make the maritime powers of Europe, the inhabitants of London and Paris, pay dearer for sugar than those of Vienna, a thousand miles from the sea; because their sugar costs not only the price they pay for it by the pound, but all they pay in taxes to maintain the fleets and armies that fight for it.—With great esteem, I am, sir, your most obedient humble servant, B. FRANKLIN.

On the Gulph Stream.

Remarks upon the Navigation from Newfoundland to New York, in order to avoid the Gulph Stream on one hand, and on the other the Shoals that lie to the Southward of Nantucket and of St. George's Banks.

After you have passed the banks of Newfoundland in about the 44th degree of latitude, you will meet with nothing, till you draw near the Isle of Sables, which we commonly pass in latitude 43. Southward of this isle, the current is found to extend itself as far north as 41° 20′ or 30′, then it turns towards the E. S. E. or S. E. ¼ E.

Having passed the Isle of Sables, shape your course for the St. George's Banks, so as to pass them in about latitude 40°, because the current southward of those banks reaches as far north as 39°. The shoals of those banks lie in 41° 35′.

After having passed St. George's Banks, you must, to clear Nantucket, form your course so as to pass between the latitudes 38° 30′ and 40° 45′.

The most southern part of the shoals of Nantucket lie in about 40° 45′. The northern part of the current, directly to the south of Nantucket, is felt in about latitude 38° 30′

By observing these directions, and keeping between the stream and the shoals, the passage from the Banks of Newfoundland to New York, Delaware, or Virginia, may be considerably shortened; for so you will have the advantage of the eddy current, which moves contrary to the Gulph Stream. Whereas if to avoid the shoals you keep too far to the southward, and get into that stream, you will be retarded by it at the rate of 60 or 70 miles a day.

The Nantucket whale-men being extremely well acquainted with the Gulph Stream, its course, strength, and extent, by their constant practice of whaling on the edges of it, from their island quite down to the Bahamas, this draft of that stream was obtained from one of them, captain Folger, and caused to be engraved on the old chart in London, for the benefit of navigators, by B. FRANKLIN.

Note. The Nantucket captains who are acquainted with this stream, make their voyages from England to Boston in as short a time generally as others take in going from Boston to England, viz. from twenty to thirty days.

A stranger may know when he is in the Gulph Stream, by the warmth of the water, which is much greater than that of the water on each side of it. If then he is bound to the westward, he should cross the stream to get out of it as soon as possible. B. F.

Observations of the Warmth of the Sea-water, &c., by Fahrenheit's Thermometer, in crossing the Gulph Stream; with other remarks made on board the Pennsylvania Packet, captain Osborne, bound from London to Philadelphia, in April and May, 1775.

Date.	Hour.	Temp. of Air.	Tem. of Wat.	Wind.	Course.	Distance.	Latitude N.	Longitude W.	Remarks.
April 10			62						
11			61						
12			64						
13			65						
14			65						
26		60	70				° ′ 37 39	° ′ 60 38	Much gulph weed; saw a whale.
27		60	70	S S E	W b S		37 13	62 29	Colour of water changed.
28	8 A.M.	70	64	S W	W N W		37 48	64 35	No gulph weed.
—	6 P.M.	67	60			34			Sounded, no bottom
29	8 A.M.	63	71	N	W	44	37 26	66 0	Much light in the water last night.
—	5 P.M.	65	72	N E		}			Water again of the usual deep sea
—	11 dit.	66	66	N W b N	W b S	} 57			colour, little or no light in it at
30	8 A.M.	64	70	N E	W b N	69			night.
—	12	62	70		E b S	24	37 20	68 53	Frequent gulph weed, water con-
—	6 P.M.	64	72	E S E	W b N	43			tinues of sea colour, little light.
—	10 dit.	65	65	S		25			Much light.
May 1	7 A.M.	68	63			60			Much light all last night.
—	12	65	56	S S W	W N W	44	38 13	72 23	Colour of water changed.
—	4 P.M.	64	56		W b N	21			
—	10 dit.	64	57	S W	W N W	31			Much light.
2	8 A.M.	62	53			18	38 43	74 3	Much light. Thunder-gust.
—	12	60	53	W S W	N W	18			
—	6 P.M.	64	55	N W	W S W	15			
—	10	65	55	N b W	W b N	10			
3	7 A.M.	62	54			30	38 30	75 0	

Observations of the warmth of the Sea-Water, &c., by Fahrenheit's Thermometer; with other remarks made on board the Reprisal, captain Wycks, bound from Philadelphia to France, in October and November, 1776.

Date.	Hour A. M.	Hour P. M.	Temp. of Air.	Temp. of Wat.	Wind.	Course.	Distance.	Lat. North.	Long. West.	Remarks.
Oct. 31	10		76	70	S S E	E b S	135	38 12	70 30	Left the capes Thursday night, October 29, 1776.
		4		71						
Nov. 1	10			78	W S W	E ½ N	109	No ob.	68 12	
		4	71	81						
2	8		71	75	N					
	12			78			141	ditto.	65 23	
		4	67	76						Some sparks in the water these two last nights.
3	8			76	N W	E S E ½ E				
	12			76		E b S	160	37 0	62 7	
		4	70	76						
4	9		68	76		N b E				Ditto.
		1		76			194	36 26	58 8	
		4	68	76						
		8		78						
5	8		68	76		N E				Ditto.
	12		70	75			163	35 21	55 3	
		4		75						
		8		75						
6	8			76	E b N	S 50 E				
	12			77			75	35 33	53 52	
7	8			78	S E b E	N 30 W				
	12			77			108	36 6	52 46	
		4		77						
8	9		75	77	S b E	N 49 E				
	12			77			175	38 2	50 1	
		4		77						
9	9		75	77						
	12		75	70	S W	N 33 E	175	39 39	46 55	
		4		71						
10	8		70	68						
	12			64	E	N 17 E	64	40 39	46 27	
11	8			63						
	12			61	S E	N 8 E	41	41 19	46 19	
12	8	4	56	59						
				69	N N W	N 80 E	120	41 39	43 42	
13	all day			68	E	S 82 E	69	41 29	42 10	
14	8		70	70		N 74 E	111	42 0	39 57	
		Noon		72	E S E					
		4		71						
15	8		61	69						
		Noon		68	W S W	N 70 E	186	43 3	35 51	
		4		67						
16		Noon	65	67	S W	N 67 W	48	43 22	34 50	
		4		63						
17	8			63	E S E	N 19 E	56	44 15	34 25	
18	all day			65	S b W	N 75 E	210	45 6	29 43	Some gulph weed.
19		Noon	65	64	S W	N 80 E	238	45 46	24 2	
20	8			62	N	S 80 E	155	45 19	20 30	
		4		60						
21	9			62	S	N 88 E	94	45 22	18 17	
22	10		60	62	S S W	S 89 E	133	45 19	15 19	
23		Noon		61	W S W	S 86 E	194	45 6	10 35	
24		do.		60	N N E	N 78 E	191	45 46	6 10	
25		do.		60	N E	S 76 E	125	45 4	3 23	
26		do.	56	60	E	N 73 E	31	45 13	2 20	
27		do.		58						Soundings off Bellisle
28		do.	54	56						

A Journal of a Voyage from the Channel between France and England towards America.

Dates.	Lat. N.	Long. W	Therm. A. M. Air.	Therm. A. M. Water	Therm. P. M. Air.	Therm. P. M. Water.	Winds.	Course.	Distance.	Variation of the Needle.	Therm. noon: A.	Therm. noon: W.
July 29	49 15	4 15	69	57	63	58	These are taken on an average of 24 hours.	SW ½ W	Miles. 60	West.	73	73
30	48 28	8 58	63	58	64	63		WbS ½ S	174	22° 0′	78	78
31	47 0	13 13	64	63	omitted			SWbW	160		81	81
August 1	45 0	17 43	69	66	do.	65		NWbW	190		80	80
2	43 5	21 25	67	66	69	68		SW ½ W	131		80	80
3	41 3	25 34	70	68	71	69		SW ½ S	166	20 0	80	80
4	38 45	29 44	70	70	72	70		SW ½ W	165	16 30	80	80
5	36 49	33 10	72	71	72	72		NE	149	11 15	82	82
6	35 40	36 30	73	72	73	73		SSW ½ S	137		82	82
7	34 0	39 0	71	72	75	74		NW	78		82	82
8	32 51	40 0	71	73	77	76		North	115		82	82
9	31 30	42 30	74	74	74	77		NE	143		82	82
10	30 0	45 0	74	75	76	76		NE	103		82	82
11	28 30	47 30	76	76	78	78		ESE	56		82	82
12	27 0	50 0	76	76	81	79		East	35		81	81
13	25 30	52 30	76	76	79	78		ESE	38		80	80
14	24 0	55 0	78	78	81	80		SW ½ W	75		78	78
15	22 30	57 30	78	78	80	80		WbS ½ S	46		82	82
16	21 0	60 0	78	78	80	80		SW ½ W	69		77	77
17	19 30	62 30	78	78	80	80		SW ½ W	38		75	75
18	18 0	65 0	78	78	80	80		SWbW	100		75	75
19	16 30	67 30	78	78	80	80		SW ½ W	41		omitted	
20	15 0	70 0	78	78	80	80		SWbW	60		74	74
21	13 30	72 30	78	78	80	80		SW ½ W	14		76	76
22	12 0	75 0	78	78	80	80		SW ½ W	38		78	78
23	10 30	77 30	78	78	80	80		SW ½ W	69		78	78
24	9 0	80 0	78	78	80	80		SW ½ W	124		78	78
25	7 30	82 30	78	78	80	80		SW ½ W	159		78	78
26	6 0	85 0	78	78	80	80		SW ½ W	96		78	78
27	4 30	87 30	78	78	80	80		SW ½ W	195		78	78
28	3 0	90 0	78	78	80	80		SW ½ W	114		78	78
29	1 30	92 30	78	78	80	80		SW ½ W	89	6 0	78	78
30	0 0	95 0	78	78	80	80		SW ½ W	96		78	78
Septem. 1	1 30	97 30	78	78	80	80		SW ½ W	75		78	78
2	3 0	100 0	78	78	80	80		SW ½ W	98		78	78
3	4 30	102 30	78	78	80	80		SW ½ W	74		78	78
4	6 0	105 0	78	78	80	80		SW ½ W	108		78	78
5	7 30	107 30	78	78	80	80		SW ½ W	106		78	78
6	9 0	110 0	78	78	80	80		SW ½ W	74		78	78
7	10 30	112 30	78	78	80	80		SW ½ W	98		78	78
8	12 0	115 0	78	78	80	80		SW ½ W	74		78	78
9	13 30	117 30	78	78	80	80		SW ½ W	98		78	78
10	15 0	120 0	78	78	80	80		SW ½ W	74		78	78

N. B. Longitude is reckoned from London, and the thermometer is according to Fahrenheit.

OBSERVATIONS.

July 31. At one P. M. the Start bore W N W. distant six leagues.

August 1. The water appears luminous in the ship's wake.

— 2. The temperature of the water is taken at eight in the morning and at eight in the evening.

— 6. The water appears less luminous.

— 7. Formegas SW. dist. 32½ deg. St. Mary's SW ½ S. 33 leagues.

— 8. From this date the temperature of the water is taking at eight in the morning and at six in the evening.

August 10. Moonlight, which prevents the luminous appearance of the water.

— 11. A strong southerly current.

— 12. Ditto. From this date the temperature of the air and water was taken at noon, as well as morning and evening.

— 16. Northerly current.

— 19. First saw gulph weed.

— 21. Southerly current.

— 22. Again saw gulph weed.

— 24. The water appeared luminous in a small degree before the moon rose.

August 29. No moon, yet very little light in the water.

— 30. Much gulph weed to-day.

— 31. Ditto.

September 1. Ditto.

— 2. A little more light in the water.

— 4. No gulph weed to-day. More light in the water.

— 5. Some gulph weed again.

— 6. Little light in the water. A very hard thunder-gust in the night.

— 7. Little gulph weed.

— 8. More light in the water. Little gulph weed.

— 9. Little gulph weed. Little light in the water last evening.

— 10. Saw some beds of rock-weed; and we were surprised to observe the water six degrees colder by the thermometer than the preceding noon.

This day (10th) the thermometer still kept descending, and at five in the morning of the 11th, it was in water as low as 70, when we struck soundings. The same evening the pilot came on board, and we found our ship about five degrees of longitude ahead of the reckoning, which our captain accounted for by supposing our course to have been near the edge of the gulph stream, and thus an eddy current always in our favour. By the distance we ran from Sept. 9, in the evening, till we struck soundings, we must have been at the western edge of the gulph stream, and the change in the temperature of the water was probably owing to our suddenly passing from that current, into the waters of our own climate.

On the 14th of August the following experiment was made. The weather being perfectly calm, an empty bottle, corked very tight, was sent down twenty fathoms, and it was drawn up still empty. It was then sent down thirty-five fathoms, when the weight of the water having forced in the cork, it was drawn up full; the water it contained was immediately tried by the thermometer, and found to be 70, which was six degrees colder than at the surface: the lead and bottle were visible, but not very distinctly so, at the depth of twelve fathoms, but when only seven fathoms deep they were perfectly seen from the ship. This experiment was thus repeated Sept. 11, when we were in soundings of eighteen fathoms. A keg was previously prepared with a valve at each end, one opening inward, the other outward; this was sent to the bottom in expectation that by the valves being both open when going down, and both shut when coming up, it would keep within it the water received at bottom. The upper valve performed its office well, but the under one did not shut quite close, so that much of the water was lost in hauling it up the ship's side. As the water in the keg's passage upwards could not enter at the top, it was concluded that what water remained in it was of that near the ground, and on trying this by the thermometer, it was found to be at 58, which was twelve degrees colder than at the surface.

This last Journal was obligingly kept for me by Mr. J. Williams, my fellow-passenger in the London Packet, who made all the experiments with great exactness. [The late colonel Williams of the U. S. Engineers.]

The chart in this edition, was constructed with a view to a more comprehensive idea of the course of the gulph stream. Volney suggests, that the earth deposited by the gulph stream S. E. of Newfoundland, has formed the great banks; and that the accumulation there, has given the stream a new or more eastwardly direction. The chart also serves to illustrate the long received ideas of the progress of the shoals of fish. May not the glutinous matter seen on the water, and which all persons who have been across the line must have noticed to be luminous at night, be another cause of the phenomena of fish shoals. May they not come in search of the food, which the matter seen on the water in such abundance affords? The writer of this note has observed, that on entering the trade winds, the seamen have judged of the change of wind approaching, by the direction of the bonetta and other fish, which pass in shoals in the South Atlantic and South-eastern seas, in a direct opposition to the wind; and when not opposite to the prevailing wind, they conclude a change to be at hand from the direction towards which the fish go. The appearance of luminous floating matter at night is often followed by shoals of fish; the spawn or gluten, which the writer has had taken up in a bucket, has been often found as large as two inches diameter, and frequently induced an opinion that it was a species of maritime *cheese* or egg of an animal. An inquiry into the periodical appearance of these luminous substances on voyages to the southward, and remarks on the usual direction of the shoals of bonetta and other fish, might perhaps lead to interesting discoveries; it might be assumed as a question worthy of examination, whether the direction of shoals of fish is not towards those points from which periodical winds or currents move the waters; and that the shoals of fish which move from the north poles, by the British isles across the Atlantic, are led by their instincts in search of these periodical supplies of food; and if the deposits so made by the gulph stream on the banks of Newfoundland is not the true cause of the great abundance of fish found there.

W. D

To Oliver Neale.

On the Art of Swimming.

I CANNOT be of opinion with you that it is too late in life for you to learn to swim. The river near the bottom of your garden affords a most convenient place for the purpose. And as your new employment requires your being often on the water, of which you have such a dread, I think you would do well to make the trial; nothing being so likely to remove those apprehensions as the consciousness of an ability to swim to the shore, in case of an accident, or of supporting yourself in the water till a boat could come to take you up.

I do not know how far corks or bladders may be useful in learning to swim, having never seen much trial of them. Possibly they may be of service in supporting the body while you are learning what is called the stroke, or that manner of drawing in and striking out the hands and feet that is necessary to produce progressive motion. But you will be no swimmer till you can place some confidence in the power of the water to support you; I would therefore advise the acquiring that confidence in the first place; especially as I have known several who, by a little of the practice necessary for that purpose, have insensibly acquired the stroke, taught as it were by nature.

The practice I mean is this. Choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast, then turn round, your face to the shore, and throw an egg into the water between you and the shore. It will sink to the bottom, and be easily seen there, as your water is clear. It must lie in water so deep as that you cannot reach it to take it up but by diving for it. To encourage yourself in order to do this, reflect that your progress will be from deeper to shallower water, and that at any time you may, by bringing your legs under you, and standing on the bottom, raise your head far above the water. Then plunge under it with your eyes open, throwing yourself towards the egg, and endeavouring by the action of your hands and feet against the water to get forward till within reach of it. In this attempt you will find, that the water buoys you up against your inclination; that it is not so easy a thing to sink as you imagined; that you cannot but by active force get down to the egg. Thus you feel the power of the water to support you, and learn to confide in that power; while your endeavours to overcome it, and to reach the egg, teach you the manner of acting on the water with your feet and hands, which action is afterwards used in swimming to support your head higher above water, or to go forward through it.

I would the more earnestly press you to the trial of this method, because, though I think I satisfied you that your body is lighter than water, and that you might float in it a long time with your mouth free for breathing, if you would put yourself in a proper posture, and would be still and forbear struggling; yet till you have obtained this experimental confidence in the water, I cannot depend on your having the necessary presence of mind to recollect that posture and directions I gave you relating to it. The surprise may put all out of your mind. For though we value ourselves on being reasonable knowing creatures, reason and knowledge seem on such occasions to be of little use to us; and the brutes to whom we allow scarce a glimmering of either, appear to have the advantage of us.

I will, however, take this opportunity of repeating those particulars to you, which I mentioned in our last conversation, as, by perusing them at your leisure, you may possibly imprint them so in your memory as on occasion to be of some use to you.

1. That though the legs, arms, and head of a human body, being solid parts, are specifically something heavier than fresh water yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body taken together is too light to sink wholly under water, but some part will remain above, until the lungs become filled with water, which happens from drawing water into them instead of air, when a person in the fright attempts breathing while the mouth and nostrils are under water.

2. That the legs and arms are specifically lighter than salt water, and will be supported by it, so that a human body would not sink in salt water, though the lungs were filled as above, but from the greater specific gravity of the head.

3. That therefore a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing; and by a small motion of his hands may prevent turning, if he should perceive any tendency to it.

4. That in fresh water, if a man throws himself on his back, near the surface, he cannot long continue in that situation but by proper action of his hands on the water. If he uses no such action, the legs and lower part of the body will gradually sink till he comes into an upright position, in which he will continue suspended, the hollow of the breast keeping the head uppermost.

5. But if, in this erect position, the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of that part of the head that is out of water, reach above the mouth and nostrils, perhaps a little above the eyes, so that a man cannot long remain suspended in water with his head in that position.

6. The body continuing suspended as be-

fore, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being then under water, and its weight consequently in a great measure supported by it, the face will remain above water quite free for breathing, will rise an inch higher every inspiration, and sink as much every expiration, but never so low that the water may come over the mouth.

7. If therefore a person unacquainted with swimming and falling accidentally into the water, could have presence of mind sufficient to avoid struggling and plunging, and to let the body take this natural position, he might continue long safe from drowning till perhaps help would come. For as to the clothes, their additional weight while immersed is very inconsiderable, the water supporting it, though, when he comes out of the water, he would find them very heavy indeed.

But, as I said before, I would not advise you or any one to depend on having this presence of mind on such an occasion, but learn fairly to swim; as I wish all men were taught to do in their youth; they would, on many occurrences, be the safer for having that skill, and on many more the happier, as freer from painful apprehensions of danger, to say nothing of the enjoyment in so delightful and wholesome an exercise. Soldiers particularly should, methinks, all be taught to swim; it might be of frequent use either in surprising an enemy, or saving themselves. And if I had now boys to educate, I should prefer those schools (other things being equal) where an opportunity was afforded for acquiring so advantageous an art, which once learned is never forgotten. B. FRANKLIN.

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*On the same subject, in answer to some Inquiries of M. Dubourg.**

——I AM apprehensive that I shall not be able to find leisure for making all the disquisitions and experiments which would be desirable on this subject. I must, therefore, content myself with a few remarks.

The specific gravity of some human bodies, in comparison to that of water, has been examined by Mr. Robinson, in the Philosophical Transactions, volume 50, page 30, for the year 1757. He asserts, that fat persons with small bones float most easily upon the water.

The diving-bell is accurately described in the Transactions.

When I was a boy, I made two oval pallets, each about ten inches long, and six broad, with a hole for the thumb, in order to retain it fast in the palm of my hand. They much resembled a painter's pallets. In swimming I pushed the edges of these forward, and I struck the water with their flat surfaces as I drew them back. I remember I swam faster by means of these pallets, but they fatigued my wrists. I also fitted to the soles of my feet a kind of sandals; but I was not satisfied with them, because I observed that the stroke is partly given by the inside of the feet and the ancles, and not entirely with the soles of the feet.

We have here waistcoats for swimming, which are made of double sail-cloth, with small pieces of cork quilted in between them.

I know nothing of the *scaphandre* of M. de la Chapelle.

I know by experience, that it is a great comfort to a swimmer, who has a considerable distance to go, to turn himself sometimes on his back, and to vary in other respects the means of procuring a progressive motion.

When he is seized with the cramp in the leg, the method of driving it away is to give to the parts affected a sudden, vigorous and violent shock; which he may do in the air as he swims on his back.

During the great heats of summer there is no danger in bathing, however warm we may be, in rivers which have been thoroughly warmed by the sun. But to throw oneself into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal. I once knew an instance of four young men, who, having worked at harvest in the heat of the day, with a view of refreshing themselves, plunged into a spring of cold water: two died upon the spot, a third the next morning, and the fourth recovered with great difficulty. A copious draught of cold water, in similar circumstances, is frequently attended with the same effect in North America.

The exercise of swimming is one of the most healthy and agreeable in the world. After having swam for an hour or two in the evening, one sleeps coolly the whole night, even during the most ardent heat of summer. Perhaps the pores being cleansed, the insensible perspiration increases and occasions this coolness. It is certain that much swimming is the means of stopping a diarrhœa, and even of producing a constipation. With respect to those who do not know how to swim, or who are affected with a diarrhœa at a season which does not permit them to use that exercise, a warm bath, by cleansing and purifying the skin, is found very salutary, and often effects a radical cure. I speak from my own experience, frequently repeated, and that of others to whom I have recommended this.

You will not be displeased if I conclude these hasty remarks by informing you, that as the ordinary method of swimming is reduced to the act of rowing with the arms and legs, and is consequently a laborious and fatiguing

* This and the four following extracts of letters to M. Dubourg, are retranslated from the French edition of Dr. Franklin's works.

operation when the space of water to be crossed is considerable; there is a method in which a swimmer may pass to great distances with much facility, by means of a sail. This discovery I fortunately made by accident, and in the following manner.

When I was a boy I amused myself one day with flying a paper kite; and approaching the bank of a pond, which was near a mile broad, I tied the string to a stake, and the kite ascended to a very considerable height above the pond, while I was swimming. In a little time, being desirous of amusing myself with my kite, and enjoying at the same time the pleasure of swimming, I returned; and loosing from the stake the string with the little stick which was fastened to it, went again into the water, where I found, that, lying on my back and holding the stick in my hands, I was drawn along the surface of the water in a very agreeable manner. Having then engaged another boy to carry my clothes round the pond, to a place which I pointed out to him on the other side, I began to cross the pond with my kite, which carried me quite over without the least fatigue, and with the greatest pleasure imaginable. I was only obliged occasionally to halt a little in my course, and resist its progress, when it appeared that, by following too quick, I lowered the kite too much; by doing which occasionally I made it rise again. I have never since that time practised this singular mode of swimming, though I think it not impossible to cross in this manner from Dover to Calais. The packet-boat, however, is still preferable. B. FRANKLIN.

To M. Dubourg.

On the free Use of Air.

LONDON, July 28, 1760.

——I GREATLY approve the epithet which you give, in your letter of the 8th of June, to the new method of treating the small-pox, which you call the *tonic* or bracing method; I will take occasion, from it, to mention a practice to which I have accustomed myself. You know the cold bath has long been in vogue here as a tonic; but the shock of the cold water has always appeared to me, generally speaking, as too violent, and I have found it much more agreeable to my constitution to bathe in another element, I mean cold air. With this view I rise almost every morning, and sit in my chamber without any clothes whatever, half an hour or an hour, according to the season, either reading or writing. This practice is not in the least painful, but, on the contrary, agreeable; and if I return to bed afterwards, before I dress myself, as sometimes happens, I make a supplement to my night's rest of one or two hours of the most pleasing sleep that can be imagined. I find no ill consequences whatever resulting from it, and that at least it does not injure my health, if it does not in fact contribute much to its preservation. I shall therefore call it for the future a *bracing* or *tonic* bath. B. FRANKLIN.

On the Causes of Colds.

March 10, 1773.

——I SHALL not attempt to explain why damp clothes occasion colds, rather than wet ones, because I doubt the fact; I imagine that neither the one nor the other contribute to this effect, and that the causes of colds are totally independent of wet and even of cold. I propose writing a short paper on this subject, the first moment of leisure I have at my disposal. In the meantime I can only say, that having some suspicions that the common notion, which attributes to cold the property of stopping the pores and obstructing perspiration, was ill-founded, I engaged a young physician, who is making some experiments with Sanctorius's balance, to estimate the different proportions of his perspiration, when remaining one hour quite naked, and another warmly clothed. He pursued the experiment in this alternate manner for eight hours successively, and found his perspiration almost double during those hours in which he was naked. B. FRANKLIN.

To Francis Hopkinson.

On the Vis Inertiæ of Matter.

PHILADELPHIA, 1748.

ACCORDING to my promise, I send you *in writing* my observations on your book;* you will be the better able to consider them; which I desire you to do at your leisure, and set me right where I am wrong.

I stumble at the threshold of the building, and therefore have not read farther. The author's *vis inertiæ essential to matter*, upon which the whole work is founded, I have not been able to comprehend. And I do not think he demonstrates at all clearly (at least to me he does not) that there is really *such a property in matter*.

He says, No. 2. "Let a given body or mass of matter be called a, and let any given celerity be called c. That *celerity* doubled, tripled, &c. or halved, thirded, &c. will be 2 c, 3 c, &c. or $\frac{1}{2}$ c, $\frac{1}{3}$ c, &c. respectively; also the *body* doubled tripled, or halved, thirded, will be 2 a, 3 a, or $\frac{1}{2}$ a, $\frac{1}{3}$ a, respectively." Thus far is clear.—But he adds, "Now to move the body a with the celerity c, requires a certain force to be impressed upon it; and to move it with a celerity as 2 c, requires *twice that force* to be impressed upon it, &c." Here

* Baxter's Inquiry into the Nature of the Human Soul.

I suspect some mistake creeps in by the author's not distinguishing between a great force applied at once, or a small one continually applied to a mass of matter, in order to move it. I think it is generally allowed by the philosophers, and, for aught we know, is certainly true, that there is no mass of matter, how great soever, but may be moved by any force how small soever, (taking friction out of the question) and this small force continued, will in time bring the mass to move with any velocity whatsoever.—Our author himself seems to allow this towards the end of the same No. 2, when he is subdividing his celerities and forces; for as in continuing the division to eternity by his method of $\frac{1}{2}c$, $\frac{1}{3}c$, $\frac{1}{4}c$, &c. &c. you can never come to a fraction of velocity that is equal to c, or no celerity at all; so dividing the force in the same manner, you can never come to a fraction of force that will not produce an equal fraction of celerity.—Where then is the mighty *vis inertiæ*, and what is its strength; when the greatest assignable mass of matter will give to, or be moved by the *least* assignable force? Suppose two globes, equal to the sun and to one another, exactly equipoised in Jove's balance; suppose no friction in the centre of motion, in the beam or elsewhere; if a moscheto then were to light on one of them, would he not give motion to them both, causing one to descend and the other to rise? If it is objected, that the force of gravity helps one globe to descend, I answer, the same force opposes the other's rising: here is an equality that leaves the whole motion to be produced by the moscheto: without whom those globes would not be moved at all. What then does *vis inertiæ* do in this case? and what other effect could we expect *if there were no such thing*? Surely if it were any thing more than a phantom, there might be enough of it in such *vast* bodies, to annihilate so trifling a force by its opposition to motion!.

Our author would have reasoned more clearly, I think, if, as he has used the letter a for a certain quantity of matter, and c for a certain quantity of celerity, he had employed one letter more, and put f perhaps, for a certain quantity of force. This let us suppose to be done; and then as it is a maxim that the force of bodies in motion is equal to the quantity of matter multiplied by the celerity, (or $f = c \times a$;) and as the force received by and subsisting in matter, when it is put in motion, can never exceed the force given; so if f moves a with c, there must needs be required $2f$ to move a with $2c$; for a moving with $2c$ would have a force equal to $2f$, which it could not receive from $1f$; and this, not because there is such a thing as *vis inertiæ*, for the case would be the same *if that had no existence*; but because nothing *can* give more than it has, if $1f$ can to $1a$ give $1c$, which is the same thing as giving it $1f$; (i. e. if force applied to matter at rest, can put it in motion, and give it *equal* force) where then is *vis inertiæ*? If it existed at all in matter, should we not find the quantity of its resistance subtracted from the force given?

In No. 4. our author goes on and says, "the body a requires a certain force to be impressed on it to be moved with a celerity as c, or such a force is necessary; and therefore makes a certain resistance, &c. A body as $2a$ requires *twice* that force to be moved with the *same celerity*, or it makes twice that resistance; and so on.—This I think is not true; but that the body $2a$ moved by the force $1f$ (though the eye may judge otherwise of it) does really move with the same celerity as it did when impelled by the same force; for $2a$ is compounded of $1a \times 1a$: and if each of the $1a$'s or each part of the compound were made to move with $1c$ (as they might be by $2f$) then the whole would move with $2c$, and not with $1c$, as our author supposes. But $1f$ applied to $2a$, makes each a move with $\frac{1}{2}c$; and so the whole moves with $1c$; exactly the same as $1a$ was made to do by $1f$ before. What is equal celerity but a *measuring the same space by moving bodies in the same time*?—Now if $1a$ impelled by $1f$ measures 100 yards in a minute; and in $2a$ impelled by $1f$, each a measures 50 yards in a minute, which added make 100; are not the celerities as the forces equal? and since force and celerity in the same quantity of matter are always in *proportion* to each other, why should we, when the quantity of matter is doubled, allow the force to continue unimpaired, and yet suppose one half of the celerity to be lost?—I wonder the more at our author's mistake in this point, since in the same number I find him observing: "We may easily conceive that a body as $3a$, $4c$, &c., would make 3 or 4 bodies equal to once a, each of which would require once the first force to be moved with the celerity c." If then in $3a$, each a requires once the first force f to be moved with the celerity, c, would not each move with the force f and celerity c; and consequently the whole be $3a$ moving with $3f$ and $3c$? After so distinct an observation, how could he miss of the consequences, and imagine that $1c$ and $3c$ were the same? Thus as our author's abatement of celerity in the case of $2a$ moved by $1f$ is imaginary, so must be his additional resistance.—And here again, I am at a loss to discover any effect of the vis inertiæ.

In No. 6, he tells us, that all this is likewise certain when taken the contrary way, viz. *from motion to rest*; for the body a moving with a certain velocity, as c, requires a certain degree of force or resistance to stop that motion, &c." that is, in other words, equal force is necessary to destroy force. It may

be so. But how does this discover a *vis inertiæ*? Would not the effect be the same *if there were no such thing*? A force 1 *f* strikes a body 1 *a*, and moves it with the celerity 1 *c*, i. e. with the force 1 *f*: it requires, even according to our author, only an opposing 1 *f* to stop it. But ought it not (if there were a *vis inertiæ*) to have not only the force 1 *f*, but an additional force equal to the force of *vis inertiæ*, that *obstinate power by which a body endeavours with* all its might *to continue in its present state, whether of motion or rest*? I say, ought there not to be an opposing force equal to the sum of these?—The truth however is, that there is no body, how large soever, moving with any velocity, how great soever, but may be stopped by any opposing force, how small soever, continually applied. At least all our modern philosophers agree to tell us so.

Let me turn the thing in what light I please, I cannot discover the *vis inertiæ*, nor any effect of it. It is allowed by all, that a body 1 *a* moving with a velocity 1 *c*, and a force 1 *f striking another* body 1 *a* at rest, they will afterwards *move on together*, each with ½ *c* and ½ *f*; which, as I said before, is equal in the whole to 1 *c* and 1 *f*. If *vis inertiæ*, as in this case, neither abates the force nor the velocity of bodies, what does it, or how does it discover itself?

I imagine I may venture to conclude my observations on this piece, almost in the words of the author; that if the doctrines of the immateriality of the soul and the existence of God and of divine providence are demonstrable from no plainer principles, the *deist* [i. e. *theist*] has a desperate cause in hand. I oppose *my theist* to his atheist, because I think they are diametrically opposite; and not near of kin, as Mr. Whitfield seems to suppose; where (in his journal) he tells us, "*Mr. B. was a deist, I had almost said an atheist*;" that is *chalk*, I had almost said *charcoal*.

The din of the market* increases upon me; and that, with frequent interruptions, has, I find, made me say some things twice over; and, I suppose, forget some others I intended to say. It has, however, one good effect, as it obliges me to come to the relief of your patience with B. FRANKLIN.

To Dr. John Pringle.

On the different Strata of the Earth.

CRAVEN-STREET, Jan. 6, 1758.

I RETURN you Mr. Mitchell's paper on the strata of the earth† with thanks. The reading of it, and perusal of the draft that accompanies it, have reconciled me to those convulsions which all naturalists agree this globe has suffered. Had the different strata of clay, gravel, marble, coals, lime-stone, sand, minerals, &c. continued to lie level, one under the other, as they may be supposed to have done before those convulsions, we should have had the use only of a few of the uppermost of the strata, the others lying too deep and too difficult to be come at; but the shell of the earth being broke, and the fragments thrown into this oblique position, the disjointed ends of a great number of strata of different kinds are brought up to-day, and a great variety of useful materials put into our power, which would otherwise have remained eternally concealed from us. So that what has been usually looked upon as a *ruin* suffered by this part of the universe, was, in reality, only a preparation, or means of rendering the earth more fit for use, more capable of being to mankind a convenient and comfortable habitation.

B. FRANKLIN.

* Dr. Franklin lived in Market-street, on the North side, between 4th & 5th streets, on the east corner of an alley, where the *first* metal conductor still remains.

† The paper of Mr. Mitchell, here referred to, was published afterwards in the Philosophical Transactions of London.

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*To the Abbé Soulavie.**

Theory of the Earth.—Read in the American Philosophical Society, November 21, 1788.

PASSY, September 22, 1782.

I RETURN the papers with some corrections. I did not find coal mines under the calcareous rock in Derbyshire. I only remarked, that at the lowest part of that rocky mountain which was in sight, they were oyster shells mixed in the stone; and part of the high county of Derby being probably as much above the level of the sea, as the coal mines of Whitehaven were below it, it seemed a proof, that there had been a great *bouleversement* in the surface of that island, some part of it having been depressed under the sea, and other parts, which had been under it, being raised above it. Such changes in the superficial parts of the globe, seemed to me unlikely to happen, if the earth were solid to the centre. I therefore imagined, that the internal parts might be a fluid more dense, and of greater specific gravity than any of the solids we are acquainted with, which therefore might swim in or upon that fluid. Thus the surface of the globe would be a shell, capable of being broken and disorded by the violent movements of the fluid on which it rested. And as air has been compressed by art so as to be twice as dense as water, in which case, if such air and water could be contained in a strong glass vessel, the air would be seen to take the lowest place, and the water to float above and upon it; and as we know not yet the degree of density to which air may be compressed,

* Occasioned by his sending me some notes he had taken of what I had said to him in conversation on the Theory of the Earth. I wrote it to set him right in some point wherein he had mistaken my meaning. B. F.

and M. Amontons calculated, that its density increasing as it approached the centre, in the same proportion as above the surface, it would at the depth of —— leagues, be heavier than gold; possibly the dense fluid occupying the internal parts of the globe might be air compressed. And as the force of expansion in dense air when heated, is in proportion to its density, this central air might afford another agent to move the surface, as well as be of use in keeping alive the subterraneous fires; though, as you observe, the sudden rarefaction of water coming into contact without those fires, may also be an agent sufficiently strong for that purpose, when acting between the incumbent earth and the fluid on which it rests.

If one might indulge imagination in supposing how such a globe was formed, I should conceive, that all the elements in separate particles being originally mixed in confusion, and occupying a great space, they would (as soon as the almighty fiat ordained gravity, or the mutual attraction of certain parts, and the mutual repulsion of others, to exist) all move to their common centre: that the air being a fluid whose parts repel each other, though drawn to the common centre by their gravity would be densest towards the centre, and rarer as more remote; consequently all matters lighter than the central parts of that air and immersed in it, would recede from the centre, and rise till they arrived at that region of the air which was of the same specific gravity with themselves, where they would rest; while other matter, mixed with the lighter air, would descend, and the two meeting would form the shell of the first earth, leaving the upper atmosphere nearly clear. The original movement of the parts towards their common centre would naturally form a whirl there; which would continue upon the turning of the new-formed globe upon its axis, and the greatest diameter of the shell would be in its equator. If by any accident afterwards the axis should be changed, the dense internal fluid, by altering its form, must burst the shell and throw all its substance into the confusion in which we find it. I will not trouble you at present with my fancies concerning the manner of forming the rest of our system.—Superior beings smile at our theories, and at our presumption in making them. I will just mention, that your observations on the ferruginous nature of the lava which is thrown out from the depths of our volcanoes, gave me great pleasure. It has long been a supposition of mine, that the iron contained in the surface of the globe has made it capable of becoming as it is, a great magnet; that the fluid of magnetism perhaps exists in all space; so that there is a magnetical north and south of the universe, as well as of this globe, and that if it were possible for a man to fly from star to star, he migh govern his course by the compass; that it was by the power of this general magnetism this globe became a particular magnet. In soft or hot iron the fluid of magnetism is naturally diffused equally; when within the influence of the magnet it is drawn to one end of the iron, made denser there and rarer at the other. While the iron continues soft and hot, it is only a temporary magnet; if it cools or grows hard in that situation, it becomes a permanent one, the magnetic fluid not easily resuming its equilibrium. Perhaps it may be owing to the permanent magnetism of this globe, which it had not at first, that its axis is at present kept parallel to itself, and not liable to the changes it formerly suffered, which occasioned the rupture of its shell, the submersions and emersions of its lands, and the confusion of its seasons. The present polar and equatorial diameters differing from each other near ten leagues, it is easy to conceive, in case some power should shift the axis gradually, and place it in the present equator, and make the new equator pass through the present poles, what a sinking of the waters would happen in the present equatorial regions, and what a rising in the present polar regions; so that vast tracts would be discovered, that now are under water, and others covered, that are now dry, the water rising and sinking in the different extremes near five leagues. Such an operation as this possibly occasioned much of Europe, and among the rest this mountain of Passy on which I live, and which is composed of limestone, rock and sea-shells, to be abandoned by the sea, and to change its ancient climate, which seems to have been a hot one. The globe being now become a perfect magnet, we are, perhaps, safe from any change of its axis.—But we are still subject to the accidents on the surface, which are occasioned by a wave in the internal ponderous fluid; and such a wave is producible by the sudden violent explosion you mention, happening from the junction of water and fire under the earth, which not only lifts the incumbent earth that is over the explosion, but impressing with the same force the fluid under it, creates a wave, that may run a thousand leagues, lifting, and thereby shaking, successively, all the countries under which it passes. I know not, whether I have expressed myself so clearly, as not to get out of your sight in these reveries. If they occasion any new inquiries, and produce a better hypothesis, they will not be quite useless. You see I have given a loose to imagination; but I approve much more your method of philosophising, which proceeds upon actual observation, makes a collection of facts, and concludes no farther than those facts will warrant. In my present circumstances, that mode of studying the nature of

the globe is out of my power, and therefore I have permitted myself to wander a little in the wilds of fancy. With great esteem,

B. FRANKLIN.

P. S. I have heard, that chemists can by their art decompose stone and wood, extracting a considerable quantity of water from the one, and air from the other. It seems natural to conclude from this, that water and air were ingredients in their original composition; for men cannot make new matter of any kind.—In the same manner may we not suppose, that when we consume combustibles of all kinds, and produce heat or light, we do not create that heat or light; but only decompose a substance, which received it originally as a part of its composition? Heat may be thus considered as originally in a fluid state; but attracted by organized bodies in their growth, becomes a part of the solid. Besides this, I can conceive, that in the first assemblage of the particles of which this earth is composed, each brought its portion of the loose heat that had been connected with it, and the whole, when pressed together, produced the internal fire that still subsists.

To David Rittenhouse.

New and curious Theory of Light and Heat.—Read in the American Philosophical Society, November 20, 1788.

UNIVERSAL space, as far as we know of it, seems to be filled with a subtle fluid, whose motion, or vibration, is called light.

This fluid may possibly be the same with that, which being attracted by, and entering into other more solid matter, dilates the substance by separating the constituent particles, and so rendering some solids fluid, and maintaining the fluidity of others; of which fluid, when our bodies are totally deprived, they are said to be frozen; when they have a proper quantity, they are in health, and fit to perform all their functions; it is then called natural heat; when too much, it is called fever; and when forced into the body in too great a quantity from without, it gives pain, by separating and destroying the flesh, and is then called burning, and the fluid so entering and acting is called fire.

While organized bodies, animal or vegetable, are augmenting in growth, or are supplying their continual waste, is not this done by attracting and consolidating this fluid called fire, so as to form of it a part of their substance? And is it not a separation of the parts of such substance, which, dissolving its solid state, sets that subtle fluid at liberty, when it again makes its appearance as fire?

For the power of man relative to matter, seems limited to the separating or mixing the various kinds of it, or changing its form and appearance by different compositions of it; but does not extend to the making or creating new matter, or annihilating the old. Thus, if fire be an original element or kind of matter, its quantity is fixed and permanent in the universe. We cannot destroy any part of it, or make addition to it; we can only separate it from that which confines it, and so set it at liberty; as when we put wood in a situation to be burnt, or transfer it from one solid to another, as when we make lime by burning stone, a part of the fire dislodged in the fuel being left in the stone. May not this fluid, when at liberty, be capable of penetrating and entering into all bodies, organized or not, quitting easily in totality those not organized, and quitting easily in part those which are; the part assumed and fixed remaining till the body is dissolved?

Is it not this fluid which keeps asunder the particles of air, permitting them to approach, or separating them more, in proportion as its quantity is diminished or augmented?

Is it not the greater gravity of the particles of air, which forces the particles of this fluid to mount with the matters to which it is attached, as smoke or vapour?

Does it not seem to have a greater affinity with water, since it will quit a solid to unite with that fluid, and go off with it in vapour, leaving the solid cold to the touch, and the degree measurable by the thermometer?

The vapour rises attached to this fluid, but at a certain height they separate, and the vapour descends in rain, retaining but little of it, in snow or hail less. What becomes of that fluid? Does it rise above our atmosphere, and mix with the universal mass of the same kind?

Or does a spherical stratum of it, denser, as less mixed with air, attracted by this globe, and repelled or pushed up only to a certain height from its surface, by the greater weight of air, remain there surrounding the globe, and proceeding with it round the sun?

In such case, as there may be a continuity or communication of this fluid through the air quite down to the earth, is it not by the vibrations given to it, by the sun, that light appears to us? And may it not be, that every one of the infinitely small vibrations, striking common matter with a certain force, enters its substance, is held there by attraction, and augmented by succeeding vibrations, till the matter has received as much as their force can drive into it?

Is it not thus, that the surface of this globe is continually heated by such repeated vibrations in the day, and cooled by the escape of the heat when those vibrations are discontinued in the night, or intercepted and reflected by clouds?

Is it not thus, that fire is amassed and makes the greatest part of the substance of combustible bodies?

Perhaps, when this globe was first formed, and its original particles took their place at certain distances from the centre, in proportion to their greater or less gravity, the fluid fire, attracted towards that centre, might in great part be obliged, as lightest, to take place above the rest, and thus form the sphere of fire above supposed, which would afterwards be continually diminishing by the substance it afforded to organized bodies, and the quantity restored to it again, by the burning or other separating of the parts of those bodies.

Is not the natural heat of animals thus produced, by separating in digestion the parts of food, and setting their fire at liberty?

Is it not this sphere of fire which kindles the wandering globes that sometimes pass through it in our course round the sun, have their surface kindled by it, and burst when their included air is greatly rarefied by the heat on their burning surfaces?

May it not have been from such considerations that the ancient philosophers supposed a sphere of fire to exist above the air of our atmosphere? B. FRANKLIN.

To Mr. Bowdoin.

Queries and Conjectures relating to Magnetism and the Theory of the Earth.—Read in the American Philosophical Society, January 15, 1790.

I RECEIVED your favours by Messrs. Gore, Hilliard, and Lee, with whose conversation I was much pleased, and wished for more of it; but their stay with us was too short. Whenever you recommend any of your friends to me, you oblige me.

I want to know whether your Philosophical Society received the second volume of our Transactions. I sent it, but never heard of its arriving. If it miscarried, I will send another. Has your Society among its books the French work *Sur les Arts, et les Metiers?* It is voluminous, well executed, and may be useful in our country. I have bequeathed it them in my will; but if they have it already, I will substitute something else.

Our ancient correspondence used to have something philosophical in it. As you are now more free from public cares, and I expect to be so in a few months, why may we not resume that kind of correspondence? Our much regretted friend Winthrop once made me the compliment, that I was good at starting game for philosophers, let me try if I can start a little for you.

Has the question, how came the earth by its magnetism, ever been considered?

Is it likely that *iron ore* immediately existed when this globe was first formed; or may it not rather be supposed a gradual production of time?

If the earth is at present magnetical, in virtue of the masses of iron ore contained in it, might not some ages pass before it had magnetic polarity?

Since iron ore may exist without that polarity, and by being placed in certain circumstances may obtain it, from an external cause, is it not possible that the earth received its magnetism from some such cause?

In short, may not a magnetic power exist throughout our system, perhaps through all systems, so that if men could make a voyage in the starry regions, a compass might be of use? And may not such universal magnetism, with its uniform direction, be serviceable in keeping the diurnal revolution of a planet more steady to the same axis?

Lastly, as the poles of magnets may be changed by the presence of stronger magnets, might not, in ancient times, the near passing of some large comet of greater magnetic power than this globe of ours have been a means of changing its poles, and thereby wrecking and deranging its surface, placing in different regions the effect of centrifugal force, so as to raise the waters of the sea in some, while they were depressed in others?

Let me add another question or two, not relating indeed to magnetism, but, however, to the theory of the earth.

Is not the finding of great quantities of shells and bones of animals (natural to hot climates) in the cold ones of our present world, some proof that its poles have been changed? Is not the supposition that the poles have been changed, the easiest way of accounting for the deluge, by getting rid of the old difficulty how to dispose of its waters after it was over? Since if the poles were again to be changed, and placed in the present equator, the sea would fall there about fifteen miles in height, and rise as much in the present polar regions; and the effect would be proportionable if the new poles were placed any where between the present and the equator.

Does not the apparent wreck of the surface of this globe, thrown up into long ridges of mountains, with strata in various positions, make it probable, that its internal mass is a fluid; but a fluid so dense as to float the heaviest of our substances? Do we know the limit of condensation air is capable of? Supposing it to grow denser *within* the surface, in the same proportion nearly as it does *without*, at what depth may it be equal in density with gold?

Can we easily conceive how the strata of the earth could have been so deranged, if it had not been a mere shell supported by a heavier fluid? Would not such a supposed internal fluid globe be immediately sensible of a change in the situation of the earth's axis, alter its form, and thereby burst the shell, and throw up parts of it above the rest? As if we would alter the position of the fluid contained

in the shell of an egg, and place its longest diameter where the shortest now is, the shell must break; but would be much harder to break, if the whole internal substance were as solid and hard as the shell.

Might not a wave, by any means raised in this supposed internal ocean of extremely dense fluid, raise in some degree, as it passes, the present shell of incumbent earth, and break it in some places, as in earthquakes? And may not the progress of such wave, and the disorders it occasions among the solids of the shell, account for the rumbling sound being first heard at a distance, augmenting as it approaches, and gradually dying away as it proceeds? A circumstance observed by the inhabitants of South America in their last great earthquake, that noise coming from a place, some degrees north of Lima, and being traced by inquiry quite down to Buenos Ayres, proceeded regularly from north to south at the rate of leagues per minute, as I was informed by a very ingenious Peruvian whom I met with at Paris. B. FRANKLIN.

To M. Dubourg.

On the Nature of Sea Coal.

—— I AM persuaded, as well as you, that the sea coal has a vegetable origin, and that it has been formed near the surface of the earth; but as preceding convulsions of nature had served to bring it very deep in many places, and covered it with many different strata, we are indebted to subsequent convulsions for having brought within our view the extremities of its veins, so as to lead us to penetrate the earth in search of it. I visited last summer a large coal mine at Whitehaven, in Cumberland; and in following the vein and descending by degrees towards the sea, I penetrated below the ocean, where the level of its surface was more than eight hundred fathom above my head, and the miners assured me, that their works extended some miles beyond the place where I then was, continually and gradually descending under the sea. The slate, which forms the roof of this coal mine, is impressed in many places with the figures of leaves and branches of fern, which undoubtedly grew at the surface when the slate was in the state of sand on the banks of the sea. Thus it appears that this vein of coal has suffered a prodigious settlement.

B. FRANKLIN.

Dr. Perkins to Dr. Franklin.

Respecting the number of deaths in Philadelphia by Inoculation.

BOSTON, August 3, 1732.

SIR,—This comes to you on account of Dr. Douglass: he desired me to write to you for what you know of the number that died of the inoculation in Philadelphia, telling me he designed to write something on the small-pox shortly. We shall both be obliged to you for a word on this affair.

The chief particulars of our visitation, you have in the public prints. But the less degree of mortality than usual in the common way of infection, seems chiefly owing to the purging method designed to prevent the secondary fever; a sixth, but had we been experienced in this way, at the first method first begun and carried on in this town, and with success beyond expectation. We lost one in eleven, one-coming of the distemper, probably the proportion had been but one in thirteen or fourteen. In the year 1730 we lost one in nine, which is more favourable than ever before with us. The distemper pretty much the same then as now, but some circumstances not so kind this time.

If there be any particulars which you want to know, please to signify what they are, and I shall send them.

The number of our inhabitants decreases. On a strict inquiry, the overseers of the poor find but fourteen thousand one hundred and ninety whites, and one thousand five hundred and forty-four blacks, including those absent on account of the small-pox, many of whom, it is probable, will never return.

I pass this opportunity without any particulars of my old theme. One thing, however, I must mention, which is, that perhaps my last letters contained something that seemed to militate with your doctrine of the *Origin*, &c. But my design was only to relate the phenomena as they appeared to me. I have received so much light and pleasure from your writings, as to prejudice me in favour of every thing from your hand, and leave me only liberty to observe, and a power of dissenting when some great probability might oblige me: and if at any time that be the case, you will certainly hear of it.

To Dr. Perkins.

Answer to the preceding.

PHILADELPHIA, Aug. 13, 1732.

I RECEIVED your favour of the 3d instant. Some time last winter I procured from one of our physicians an account of the number of persons inoculated during the five visitations of the small-pox we have had in twenty-two years; which account I sent to Mr. W. V. of your town, and have no copy. If I remember right, the number exceeded eight hundred, and the deaths were but four. I suppose Mr. V. will show you the account, if he ever received it. Those four were all that our doctors allow to have died of the small-pox by inoculation, though I think there were two more of the inoculated who died of the distemper; but the eruptions appearing soon after the operation,

t is supposed they had taken the infection before, in the common way.

I shall be glad to see what Dr. Douglass may write on the subject. I have a French piece printed at Paris, 1724, entitled, *Observations sur la Saignée du Pied, et sur la Purgation au commencement de la Petite Verole, et Raisons de double contre l'Inoculation.*—A letter of the doctor's is mentioned in it. If he or you have it not, and desire to see it, I will send it.—Please to favour me with the particulars of your purging method, to prevent the secondary fever.

I am indebted for your preceding letter, but business sometimes obliges me to postpone philosophical amusements. Whatever I have wrote of that kind, are really, as they are entitled, but *Conjectures* and *Suppositions*; which ought always to give place, when careful observation militates against them. I own I have too strong a penchant to the building of hypotheses; they indulge my natural indolence: I wish I had more of your patience and accuracy in making observations, on which, alone, true philosophy can be founded. And, I assure you, nothing can be more obliging to me, than your kind communication of those you make, however they may disagree with my pre-conceived notions.

I am sorry to hear that the number of your inhabitants decreases. I sometime, since, wrote a small paper of *Thoughts on the peopling of Countries*,* which, if I can find, I will send you, to obtain your sentiments. The favourable opinion you express of my writings may, you see, occasion you more trouble than you expected from, B. FRANKLIN.

To Benjamin Vaughan.

*On the Effects of Lead upon the human Constitution.**

PHILADELPHIA, July 31, 1786.

I RECOLLECT that when I had last the pleasure of seeing you at Southampton, now a twelvemonth since, we had some conversation on the bad effects of lead taken inwardly; and that at your request I promised to send you in writing a particular account of several facts I then mentioned to you, of which you thought some good use might be made. I now sit down to fulfil that promise.

The first thing I remember of this kind was a general discourse in Boston when I was a boy, of a complaint from North Carolina against New England rum, that it poisoned their people, giving them the dry belly-ache, with a loss of the use of their limbs. The distilleries being examined on the occasion, it was found, that several of them used leaden still-heads and worms, and the physicians were of opinion, that the mischief was occasioned by that use of lead. The legislature of Massachusetts thereupon passed an act, prohibiting, under severe penalties, the use of such still-heads and worms thereafter.

In 1724, being in London, I went to work in the printing-house of Mr. Palmer, Bartholomew-close, as a compositor. I there found a practice, I had never seen before, of drying a case of types (which are wet in distribution) by placing it sloping before the fire. I found this had the additional advantage, when the types were not only dried but heated, of being comfortable to the hands working over them in cold weather. I therefore sometimes heated my case when the types did not want drying. But an old workman observing it, advised me not to do so, telling me I might lose the use of my hands by it, as two of our companions had nearly done, one of whom, that used to earn his guinea a week, could not then make more than ten shillings, and the other, who had the *dangles*, but seven and sixpence. This, with a kind of obscure pain, that I had sometimes felt, as it were, in the bones of my hand when working over the types made very hot, induced me to omit the practice. But talking afterwards with Mr. James, a letter-founder in the same close, and asking him if his people, who worked over the little furnaces of melted metal, were not subject to that disorder; he made light of any danger from the effluvia, but ascribed it to particles of the metal swallowed with their food by slovenly workmen, who went to their meals after handling the metal, without well washing their fingers, so that some of the metalline particles were taken off by their bread and eaten with it. This appeared to have some reason in it. But the pain I had experienced made me still afraid of those effluvia.

Being in Derbyshire at some of the furnaces for smelting of lead ore, I was told, that the smoke of those furnaces was pernicious to the neighbouring grass and other vegetables; but I do not recollect to have heard any thing of the effect of such vegetables eat en by animals. It may be well to make the inquiry.

In America I have often observed, that on the roofs of our shingled-houses, where moss is apt to grow in northern exposures, if there be any thing on the roof painted with white lead, such as balusters, or frames of dormant windows, &c. there is constantly a streak on the shingles from such paint down to the eaves, on which no moss will grow, but the wood remains constantly clean and free from it. We seldom drink rain water that fall on our houses; and if we did, perhaps the small quantity of lead descending from such paint might not be sufficient to pro-

* This letter was published in a work by Dr. John Hunter, entitled *Observations on the Diseases of the Army.*

duce any sensible ill-effect on our bodies. But I have been told of a case in Europe, I forget the place, where a whole family was afflicted with what we call the dry belly-ache, or *colica pictorum*, by drinking rain water. It was at a country-seat, which, being situated too high to have the advantage of a well, was supplied with water from a tank, which received the water from the leaded roofs. This had been drank several years without mischief, but some young trees planted near the house growing up above the roof, and shedding their leaves upon it, it was supposed, that an acid in those leaves had corroded the lead they covered, and furnished the water that year with its baneful particles and qualities.

When I was in Paris with sir John Pringle in 1767, he visited *La Charité*, an hospital particularly famous for the cure of that malady, and brought from thence a pamphlet, containing a list of the names of persons, specifying their professions or trades, who had been cured there. I had the curiosity to examine that list, and found, that all the patients were of trades, that some way or other use or work in lead; such as plumbers, glaziers, painters, &c. excepting only two kinds, stone-cutters, and soldiers. In them, I could not reconcile it to my notion, that lead was the cause of that disorder. But on my mentioning it to a physician of that hospital, he informed me, that the stone-cutters are continually using melted lead to fix the ends of iron balustrades in stone; and that the soldiers had been employed by painters as labourers in grinding of colours.

This, my dear friend, is all I can at present recollect on the subject. You will see by it, that the opinion of this mischievous effect from lead, is at least above sixty years old; and you will observe with concern how long a useful truth may be known and exist, before it is generally received and practised on.

B. FRANKLIN.

To M. Dubourg.

Observations on the prevailing Doctrines of Life and Death.

——Your observations on the causes of death, and the experiments which you propose for recalling to life those who appear to be killed by lightning, demonstrate equally your sagacity and your humanity. It appears, that the doctrines of life and death, in general, are yet but little understood.

A toad buried in sand will live, it is said, till the sand becomes petrified: and then, being enclosed in the stone, it may still live for we know not how many ages. The facts which are cited in support of this opinion are too numerous, and too circumstantial, not to deserve a certain degree of credit. As we are accustomed to see all the animals, with which we are acquainted, eat and drink, it appears to us difficult to conceive, how a toad can be supported in such a dungeon: but if we reflect, that the necessity of nourishment, which animals experience in their ordinary state, proceeds from the continual waste of their substance by perspiration, it will appear less incredible, that some animals in a torpid state, perspiring less because they use no exercise, should have less need of aliment; and that others, which are covered with scales or shells, which stop perspiration, such as land and sea-turtles, serpents, and some species of fish, should be able to subsist a considerable time without any nourishment whatever.—A plant, with its flowers, fades and dies immediately, if exposed to the air without having its root immersed in a humid soil, from which it may draw a sufficient quantity of moisture to supply that which exhales from its substance and is carried off continually by the air. Perhaps, however, if it were buried in quicksilver, it might preserve for a considerable space of time its vegetable life, its smell, and colour. If this be the case, it might prove a commodious method of transporting from distant countries those delicate plants, which are unable to sustain the inclemency of the weather at sea, and which require particular care and attention. I have seen an instance of common flies preserved in a manner somewhat similar. They had been drowned in Madeira wine, apparently about the time when it was bottled in Virginia, to be sent hither (to London). At the opening of one of the bottles, at the house of a friend where I then was, three drowned flies fell into the first glass that was filled. Having heard it remarked, that drowned flies were capable of being revived by the rays of the sun, I proposed making the experiment upon these: they were therefore exposed to the sun upon a sieve, which had been employed to strain them out of the wine. In less than three hours, two of them began by degrees to recover life. They commenced by some convulsive motions of the thighs, and at length they raised themselves upon their legs, wiped their eyes with their fore-feet, beat and brushed their wings with their hind-feet, and soon after began to fly, finding themselves in Old England, without knowing how they came thither. The third continued lifeless till sunset, when, losing all hopes of him, he was thrown away.

I wish it were possible, from this instance, to invent a method of embalming drowned persons, in such a manner that they may be recalled to life at any period, however distant; for having a very ardent desire to see and observe the state of America an hundred years hence, I should prefer to any ordinary death, the being immersed in a cask of Ma-

deira wine, with a few friends till that time, to be then recalled to life by the solar warmth of my dear country! But since in all probability we live in an age too early and too near the infancy of science, to hope to see such an art brought in our time to its perfection, I must for the present content myself with the treat, which you are so kind as to promise me, of the resurrection of a fowl or a turkey-cock.

B. FRANKLIN.

An account of the new-invented Pennsylvanian Fire-Places: wherein their construction and manner of operation is particularly explained; their advantages above every other method of warming rooms demonstrated; and all objections that have been raised against the use of them answered and obviated. With directions for putting them up, and for using them to the best advantage. And a Copper-Plate, in which the several parts of the machine are exactly laid down, from a scale of equal parts.—First printed at Philadelphia in 1745.

In these northern colonies the inhabitants keep fires to sit by generally seven months in the year; that is, from the beginning of October, to the end of April; and, in some winters, near eight months, by taking in part of September and May.

Wood, our common fuel, which within these hundred years might be had at every man's door, must now be fetched near one hundred miles to some towns, and makes a very considerable article in the expense of families.

As therefore so much of the comfort and conveniency of our lives, for so great a part of the year, depends on the article of *fire*; since fuel is become so expensive, and (as the country is more cleared and settled) will of course grow scarcer and dearer, any new proposal for saving the wood, and for lessening the charge, and augmenting the benefit of fire, by some particular method of making and managing it, may at least be thought worth consideration.

The new fire-places are a late invention to that purpose, of which this paper is intended to give a particular account.

That the reader may the better judge whether this method of managing fire has any advantage over those heretofore in use, it may be proper to consider both the old and new methods separately and particularly, and afterwards make the comparison.

In order to this, it is necessary to understand well, some few of the properties of air and fire, viz.

1. Air is rarefied by *heat*, and condensed by *cold*, *i. e.* the same quantity of air takes up more space when warm than when cold. This may be shown by several very easy experiments. Take any clear glass bottle (a Florence flask stript of the straw is best) place it before the fire, and as the air within is warmed and rarefied part of it will be driven out of the bottle; turn it up, place its mouth in a vessel of water, and remove it from the fire; then, as the air within cools and contracts, you will see the water rise in the neck of the bottle, supplying the place of just so much air as was driven out. Hold a large hot coal near the side of the bottle, and as the air within feels the heat, it will again distend and force out the water.—Or, fill a bladder not quite full of air, tie the neck tight, and lay it before a fire as near as may be without scorching the bladder; as the air within heats, you will perceive it to swell and fill the bladder, till it becomes tight, as if full blown: remove it to a cool place, and you will see it fall gradually, till it becomes as lank as at first.

2. Air rarefied and distended by heat is specifically* lighter than it was before, and will rise in other air of greater density. As wood, oil, or any other matter specifically lighter than water, if placed at the bottom of a vessel of water, will rise till it comes to the top; so rarefied air will rise in common air, till it either comes to air of equal weight, or is by cold reduced to its former density.

A fire then being made in any chimney, the air over the fire is rarefied by the heat, becomes lighter, and therefore immediately rises in the funnel, and goes out; the other air in the room (flowing towards the chimney) supplies its place, is rarefied in its turn, and rises likewise; the place of the air thus carried out of the room, is supplied by fresh air coming in through doors and windows, or, if they be shut, through every crevice with violence, as may be seen by holding a candle to a key-hole: if the room be so tight as that all the crevices together will not supply so much air as is continually carried off, then, in a little time, the current up the funnel must flag, and the smoke being no longer driven up, must come into the room.

1. Fire (*i. e.* common fire) throws out light, heat, and smoke (or fume.) The two first move in right lines, and with great swiftness, the latter is but just separated from the fuel, and then moves only as it is carried by the stream of rarefied air: and without a continual accession and recession of air, to carry off the smoky fumes, they would remain crowded about the fire, and stifle it.

2. Heat may be separated from the smoke as well as from the light, by means of a plate of iron, which will suffer heat to pass through it without the others.

* Body or matter of any sort, is said to be *specifically* heavier or lighter than other matter, when it has more or less substance or weight in the same dimensions.

3. Fire sends out its rays of heat as well as rays of light equally every way; but the greatest sensible heat is over the fire, where there is, besides the rays of heat shot upwards, a continual rising stream of hot air, heated by the rays shot round on every side.

These things being understood, we proceed to consider the fire-places heretofore in use, viz.

1. The large open fire-places used in the days of our fathers, and still generally in the country, and in kitchens.

2. The newer-fashioned fire-places, with low breasts, and narrow hearths.

3. Fire-places with hollow backs, hearths, and jambs of iron (described by M. Gauger, in his tract entitled, *La Mechanique de Feu*) for warming the air as it comes into the room.

4. The Holland stoves, with iron doors opening into the room.

5. The German stoves, which have no opening in the room where they are used, but the fire is put in from some other room, or from without.

6. Iron pots, with open charcoal fires, placed in the middle of a room.

1. The first of these methods has generally the conveniency of two warm seats, one in each corner; but they are sometimes too hot to abide in, and, at other times, incommoded with the smoke; there is likewise good room for the cook to move, to hang on pots, &c. Their inconveniences are, that they almost always smoke, if the door be not left open; that they require a large funnel, and a large funnel carries off a great quantity of air, which occasions what is called a strong draft to the chimney, without which strong draft the smoke would come out of some part or other of so large an opening, so that the door can seldom be shut; and the cold air so nips the backs and heels of those that sit before the fire, that they have no comfort till either screens or settles are provided (at a considerable expense) to keep it off, which both cumber the room, and darken the fire-side. A moderate quantity of wood on the fire, in so large a hearth, seems but little; and, in so strong and cold a draught, warms but little; so that people are continually laying on more. In short, it is next to impossible to warm a room with such a fire-place: and I suppose our ancestors never thought of warming rooms to sit in; all they purposed was, to have a place to make a fire in, by which they might warm themselves when cold.

2. Most of these old-fashioned chimneys in towns and cities, have been, of late years, reduced to the second sort mentioned, by building jambs within them, narrowing the hearth, and making a low arch or breast. It is strange, methinks, that though chimneys have been so long in use, their construction should be so little understood till lately, that no workman pretended to make one which should always carry off all smoke, but a chimney-cloth was looked upon as essential to a chimney. This improvement, however, by small openings and low breasts, has been made in our days; and success in the first experiments has brought it into general use in cities, so that almost all new chimneys are now made of that sort, and much fewer bricks will make a stack of chimneys now than formerly. An improvement, so lately made, may give us room to believe, that still farther improvements may be found to remedy the inconveniences yet remaining. For these new chimneys, though they keep rooms generally free from smoke, and the opening being contracted; will allow the door to be shut, yet the funnel still requiring a considerable quantity of air, it rushes in at every crevice so strongly, as to make a continual whistling or howling; and it is very uncomfortable, as well as dangerous, to sit against any such crevice. Many colds are caught from this cause only, it being safer to sit in the open street, for then the pores do all close together and the air does not strike so sharply against any particular part of the body.

The Spaniards have a proverbial saying,

> If the wind blows on you through a hole,
> Make your will, and take care of your soul.

Women particularly from this cause, as they sit much in the house, get colds in the head, rheums and defluctions, which fall into their jaws and gums, and have destroyed early many a fine set of teeth in these northern colonies. Great and bright fires do also very much contribute to damage the eyes, dry and shrivel the skin, and bring on early the appearances of old age. In short, many of the diseases proceeding from colds, as fevers, pleurisies, &c. fatal to very great numbers of people, may be ascribed to strong drawing chimneys, whereby, in severe weather, a man is scorched before while he is froze behind.* In the mean

* As the writer is neither physician nor philosopher, the reader may expect he should justify these his opinions by the authority of some that are so. M. Clare, F R S in his treatise of *The motion of Fluids*, says, page 246, &c. "And here it may be remarked, that it is more prejudicial to health to sit near a window or a door, in a room where there are many candles and a fire, than in a room without; for the consumption of air thereby occasioned, will always be very considerable, and this must necessarily be replaced by cold air from without. Down the chimney none can enter, the stream of warm air always arising therein absolutely forbids it, the supply must therefore come in wherever other openings shall be found. If these happen to be small, *let those who sit near them beware;* the smaller the floodgate, the smarter will be the stream. Was a man, even in a sweat, to leap into a cold bath, or jump from his warm bed, in the intensest cold, even in a frost, provided he do not continue over long therein, and be in health when he does this, we see by experience that he gets no harm. If he sits a little while against a window, into which a successive current of cold air comes, his pores are closed, and he gets a fever. In the

time, very little is done by these chimneys towards warming the room; for the air round the fire-place, which is warmed by the direct rays from the fire, does not continue in the room, but is continually crowded and gathered into the chimney by the current of cold air coming behind it, and so is presently carried off.

In both these sorts of fire-places, the greatest part of the heat from the fire is lost; for as fire naturally darts heat every way, the back, the two jambs, and the hearth, drink up almost all that is given them, very little being reflected from bodies so dark, porous, and unpolished; and the upright heat, which is by far the greatest, flies directly up the chimney. Thus five sixths at least of the heat (and consequently of the fuel) is wasted, and contributes nothing towards warming the room.

3. To remedy this, the sieur Gauger gives, in his book entitled, La Mechanique de Feu, published in 1709, seven different constructions of the third sort of chimneys mentioned above, in which there are hollow cavities made by iron plates in the back, jambs, and hearths, through which plates the heat passing warms the air in those cavities which is continually coming into the room fresh and warm. The invention was very ingenious, and had many inconveniences: the room was warmed in all parts, by the air flowing into it through the heated cavities: cold air was prevented rushing through the crevices, the funnel being sufficiently supplied by those cavities: much less fuel would serve, &c. But the first expense, which was very great, the intricacy of the design, and the difficulty of the execution, especially in old chimneys, discouraged the propagation of the invention; so that there are, I suppose, very few such chimneys now in use. The upright heat, too, was almost all lost in these, as in the common chimneys.

4. The Holland iron stove, which has a flue proceeding from the top, and a small iron door opening into the room, comes next to be considered. Its conveniences are, that it makes a room all over warm; for the chimney being wholly closed, except the flue of the stove, very little air is required to supply that, and therefore not much rushes in at crevices, or at the door when it is opened. Little fuel serves, the heat being almost all saved; for it rays out almost equally from the four sides, the bottom and the top, into the room, and presently warms the air around it, which, being rarefied, rises to the ceiling, and its place is supplied by the lower air of the room, which flows gradually towards the stove, and is there warmed, and rises in its turn, so that there is a continual circulation till all the air in the room is warmed. The air, too, is gradually changed, by the stove-door's being in the room, through which part of it is continually passing, and that makes these stoves wholesomer, or at least pleasanter than the German stoves, next to be spoken of. But they have these inconveniences. There is no sight of the fire, which is in itself a pleasant thing. One cannot conveniently make any other use of the fire but that of warming the room. When the room is warm, people, not seeing the fire, are apt to forget supplying it with fuel till it is almost out, then growing cold, a great deal of wood is put in, which soon makes it too hot. The change of air is not carried on quite quick enough, so that if any smoke or ill smell happens in the room, it is a long time before it is discharged. For these reasons the Holland stove has not obtained much among the English (who love the sight of the fire) unless in some workshops, where people are obliged to sit near windows for the light, and in such places they have been found of good use.

5. The German stove is like a box, one side wanting. It is composed of five iron plates screwed together, and fixed so as that you may put the fuel into it from another room, or from the outside of the house. It is a kind

first case, the shock the body endures, is general, uniform, and therefore less fierce; in the other, a single part, a neck, or ear perchance, is attacked, and that with the greater violence probably, as it is done by a successive stream of cold air. And the cannon of a battery, pointed against a single part of a bastion, will easier make a breach than were they directed to play singly upon the whole face, and will admit an enemy much sooner into the town.".

That warm rooms, and keeping the body warm in winter, are means of preventing such diseases, take the opinion of that learned Italian physician Antonino Parcio, in the preface to his tract *de Militis Sanitate tuenda*, where speaking of a particular wet and cold winter, remarkable at Venice for its sickliness, he says, "Popularis autem pleuritis quæ Venetiis sæviit mensibus *Dec. Jan. Feb.* ex cæli, aëriisque inclementia facta est, quod non habeant hypocausta [*stove-rooms*] et quod non soliciti sunt Itali omnes de auribus, temporibus, collo, totoque corpore defendendis ab injuriis aëris; et tegmina domorum Veneti disponant parum inclinata, ut nives diutius permaneant super tegmina. E contra, Germani, qui experiuntur cæli inclementiam, perdidicere sese defendere ob aëris injuria. Tecta construunt multum inclinata, ut decidant nives. Germani abundant lignis, domusque *hypocaustis*; foris autem incedunt pannis pellibus, gossipio, bene mehercule loricati atque muniti. In Bavaria interrogabam (curiositate motus videndi Germaniam) quot nam elapsis mensibus pleuritide vel peripneumonia fuissent absumti: dicebant vix unus aut alter illis temporibus pleuritide fuit correptus.

The great Dr. Boerhaave, whose authority alone might be sufficient, in his *Aphorisms*, mentions, as one antecedent cause of pleurisies, "A cold air, driven violently through some narrow passage upon the body, overheated by labour or fire."

The eastern physicians agree with the Europeans in this point; witness the Chinese treatise entitled, *Tchang seng*; i. e. *The Art of procuring Health and long Life*, as translated in Pere Du Halde's account of China, which has this passage. "As, of all the passions which ruffle us, anger does the most mischief, so of all malignant affections of the air, a wind that comes through any narrow passage, which is cold and piercing, is most dangerous; and coming upon us unawares insinuates itself into the body, often causing grievous diseases. It should therefore be avoided, according to the advice of the ancient proverb, as carefully as the point of an arrow." These mischiefs are avoided by the use of the new-invented fire-places, as will be shown hereafter.

of oven reversed, its mouth being without, and body within the room that is to be warmed by it. This invention certainly warms a room very speedily and thoroughly with little fuel: no quantity of cold air comes in at any crevice, because there is no discharge of air which it might supply, there being no passage into the stove from the room. These are its conveniences. Its inconveniences are, that people have not even so much sight or use of the fire as in the Holland stoves, and are, moreover, obliged to breathe the same unchanged air continually, mixed with the breath and perspiration from one another's bodies, which is very disagreeable to those who have not been accustomed to it.

6. Charcoal fires in pots are used chiefly in the shops of handicraftsmen. They warm a room (that is kept close, and has no chimney to carry off the warmed air) very speedily and uniformly; but there being no draught to change the air, the sulphurous fumes from the coals, [be they ever so well kindled before they are brought in, there will be some,] mix with it, render it disagreeable, hurtful to some constitutions, and sometimes, when the door is long kept shut, produce fatal consequences.

To avoid the several inconveniences, and at the same time retain all the advantages of other fire-places, was contrived the Pennsylvanian fire place, now to be described.

This machine consists of

A bottom plate, (i) (*See the plate annexed.*)

A back plate, (ii)

Two side plates, (iii iii)

Two middle plates, (iv iv) which, joined together, form a tight box, with winding passages in it for warming the air.

A front plate, (v)

A top plate, (vi.)

These are all cast of iron, with mouldings or ledges where the plates come together, to hold them fast, and retain the mortar used for pointing to make tight joints. When the plates are all in their places, a pair of slender rods, with screws, are sufficient to bind the whole very firmly together, as it appears in Fig. 2.

There are, moreover, two thin plates of wrought iron, viz. the shutter, (vii) and the register, (viii;) besides the screw-rods O P, all which we shall explain in their order.

(i.) The bottom plate, or hearth-piece, is round before, with a rising moulding, that serves as a fender to keep coals and ashes from coming to the floor, &c. It has two ears, F G, perforated to receive the screw rods O P; a long air-hole, *a a*, through which the fresh outward air passes up into the air box; and three smoke holes B C, through which the smoke descends and passes away; all represented by dark squares. It has also double ledges to receive between them the bottom edges of the back plate, the two side plates, and the two middle plates. These ledges are about an inch asunder, and about half an inch high; a profile of two of them, joined to a fragment of plate, appears in Fig. 3.

(ii.) The back plate is without holes, having only a pair of ledges on each side, to receive the back edges of the two.

(iii iii.) Side plates: these have each a pair of ledges to receive the side edges of the front plate, and a little shoulder for it to rest on; also two pair of ledges to receive the side edges of the two middle plates which form the air box; and an oblong air-hole near the top, through which is discharged into the room the air warmed in the air-box. Each has also a wing or bracket, H and I, to keep in falling brands, coals, &c. and a small hole, Q and R, for the axis of the register to turn in.

(iv iv.) The air-box is composed of the two middle plates, D E and F G. The first has five thin ledges or partitions cast on it, two inches deep, the edges of which are received in so many pair of ledges cast in the other.—The tops of all the cavities formed by these thin deep ledges, are also covered by a ledge of the same form and depth, cast with them; so that when the plates are put together, and the joints luted, there is no communication between the air-box and the smoke. In the winding passages of this box, fresh air is warmed as it passes into the room.

(v.) The front plate is arched on the under side, and ornamented with foliages, &c. it has no ledges.

(vi.) The top plate has a pair of ears, M N, answerable to those in the bottom plate, and perforated for the same purpose: it has also a pair of ledges running round the under side to receive the top edges of the front, back, and side plates. The air-box does not reach up to the top plate by two inches and a half.

(vii.) The shutter is of thin wrought iron and light, of such a length and breadth as to close well the opening of the fire-place. It is used to blow up the fire, and to shut up and secure it at nights. It has two brass knobs for handles, *d d*, and commonly slides up and and down in a groove, left, in putting up the fire-place, between the foremost ledge of the side plates, and the face of the front plate; but some choose to set it aside when it is not in use, and apply it on occasion.

(viii.) The register is also of thin wrought iron. It is placed between the back plate and air-box, and can, by means of the key S, be turned on its axis so as to lie in any position between level and upright.

The screw-rods O P are of wrought iron, about a third of an inch thick, with a button at bottom, and a screw and nut at top, and may be ornamented with two small brasses screwed on above the nuts.

To put this machine to work,

1. A false back of four inch (or; in shallow small chimneys, two inch) brick work is to be made in the chimney, four inches or more from the true back: from the top of this false back a closing is to be made over to the breast of the chimney, that no air may pass into the chimney, but what goes under the false back, and up behind it.

2. Some bricks of the hearth are to be taken up, to form a hollow under the bottom plate; across which hollow runs a thin tight partition, to keep apart the air entering the hollow and the smoke; and is therefore placed between the air-hole and smoke-holes.

3. A passage is made, communicating with the outward air, to introduce that air into the forepart of the hollow under the bottom plate, whence it may rise through the air-hole into the air-box.

4. A passage is made from the back part of the hollow, communicating with the flue behind the false back: through this passage the smoke is to pass.

The fire-place is to be erected upon these hollows, by putting all the plates in their places, and screwing them together.

Its operation may be conceived by observing the plate entitled, Profile of the Chimney and Fire-place.

M The mantle-piece, or breast of the chimney.

C The funnel.

B The false back and closing.

E True back of the chimney.

T Top of the fire-place.

F The front of it.

A The place where the fire is made.

D The air-box.

K The hole in the side-plate, through which the warmed air is discharged out of the air-box into the room.

H The hollow filled with fresh air, entering at the passage *I*, and ascending into the air-box through the air-hole in the bottom plate near.

G The partition in the hollow to keep the air and smoke apart.

P The passage under the false back and part of the hearth for the smoke.

The arrows show the course of the smoke.

The fire being made at A, the flame and smoke will ascend and strike the top T, which will thereby receive a considerable heat. The smoke, finding no passage upwards, turns over the top of the air-box, and descends between it and the back plate to the holes in the bottom plate, heating, as it passes, both plates of the air-box, and the said back plate; the front plate, bottom and side plates are also all heated at the same time. The smoke proceeds in the passage that leads it under and behind the false back, and so rises into the chimney. The air of the room, warmed behind the back plate, and by the sides, front, and top plates, becoming specifically lighter than the other air in the room, is obliged to rise; but the closure over the fire-place hindering it from going up the chimney, it is forced out into the room, rises by the mantle-piece to the ceiling, and spreads all over the top of the room, whence being crowded down gradually by the stream of newly-warmed air that follows and rises above it, the whole room becomes in a short time equally warmed.

At the same time the air, warmed under the bottom plate, and in the air-box, rises and comes out of the holes in the side-plates, very swiftly, if the door of the room be shut, and joins its current with the stream before-mentioned, rising from the side, back, and top plates.

The air that enters the room through the air-box is fresh, though warm; and, computing the swiftness of its motion with the areas of the holes, it is found that near ten barrels of fresh air are hourly introduced by the air-box; and by this means the air in the room is continually changed, and kept, at the same time, sweet and warm.

It is to be observed, that the entering air will not be warm at first lighting the fire, but heats gradually as the fire increases.

A square opening for a trap-door should be left in the closing of the chimney, for the sweeper to go up: the door may be made of slate or tin, and commonly kept close shut, but so placed as that, turning up against the back of the chimney when open, it closes the vacancy behind the false back, and shoots the soot, that falls in sweeping, out upon the hearth. This trap-door is a very convenient thing.

In rooms where much smoking of tobacco is used, it is also convenient to have a small hole, about five or six inches square, cut near the ceiling through into the funnel: this hole must have a shutter, by which it may be closed or opened at pleasure. When open, there will be a strong draught of air through it into the chimney, which will presently carry off a cloud of smoke, and keep the room clear; if the room be too hot likewise, it will carry off as much of the warm air as you please, and then you may stop it entirely, or in part, as you think fit. By this means it is, that the tobacco smoke does not descend among the heads of the company near the fire, as it must do before it can get into common chimneys.

The manner of using this Fire-place.

Your cord-wood must be cut into three lengths; or else a short piece, fit for the fire-place, cut off, and the longer left for the kitchen or other fires. Dry hickory, or ash, or any woods that burn with a clear flame are rather to be chosen, because such are less apt to foul the smoke-passages with soot: and flame communicates with its light, as well as by contact,

greater heat to the plates and room. But where more ordinary wood is used, half a dry faggot of brush-wood, burnt at the first making the fire in the morning, is very advantageous, as it immediately, by its sudden blaze, heats the plates, and warms the room (which with bad wood slowly kindling would not be done so soon) and at the same time by the length of its flame, turning in the passages, consumes and cleanses away the soot that such bad smoky wood had produced therein the preceding day, and so keeps them always free and clean. When you have laid a little back log, and placed your billets on small dogs, as in common chimneys, and put some fire to them, then slide down your shutter as low as the dogs, and the opening being by that means contracted, the air rushes in briskly, and presently blows up the flames. When the fire is sufficiently kindled, slide it up again.* In some of these fire-places there is a little six-inch square trap-door of thin wrought iron or brass, covering a hole of like dimensions near the fore-part of the bottom plate, which being by a ring lifted up towards the fire, about an inch, where it will be retained by two springing sides fixed to it perpendicularly (*See the plate, Fig.* 4.) the air rushes in from the hollow under the bottom plate, and blows the fire. Where this is used, the shutter serves only to close the fire at nights. The more forward you can make your fire on the hearth-plate, not to be incommoded by the smoke, the sooner and more will the room be warmed. At night, when you go to bed, cover the coals or brands with ashes as usual; then take away the dogs, and slide down the shutter close to the bottom-plate, sweeping a little ashes against it, that no air may pass under it; then turn the register, so as very near to stop the flue behind. If no smoke then comes out at crevices into the room, it is right: if any smoke is perceived to come out, move the register, so as to give a little draft, and it will go the right way. Thus the room will be kept warm all night; for the chimney being almost entirely stopt, very little cold air, if any, will enter the room at any crevice. When you come to rekindle the fire in the morning, turn open the register before you lift up the slider, otherwise, if there be any smoke in the fire-place, it will come out into the room. By the same use of the shutter and register, a blazing fire may be presently stifled, as well as secured, when you have occasion to leave it for any time; and at your return you will find the brands warm, and ready for a speedy rekindling. The shutter alone will not stifle a fire, for it cannot well be made to fit so exactly but that air will enter, and that in a violent stream, so as to blow up and keep alive the flames, and consume the wood, if the draught be not checked by turning the register to shut the flue behind. The register has also two other uses. If you observe the draught of air into your fire-place to be stronger than is necessary (as in extreme cold weather it often is) so that the wood is consumed faster than usual; in that case, a quarter, half, or two thirds, turn of the register, will check the violence of the draught, and let your fire burn with the moderation you desire: and at the same time both the fire-place and the room will be the warmer, because less cold air will enter and pass through them. And if the chimney should happen to take fire (which indeed there is very little danger of, if the preceding direction be observed in making fires, and it be well swept once a year; for, much less wood being burnt, less soot is proportionably made; and the fuel being soon blown into flame by the shutter, or the trap-door bellows, there is consequently less smoke from the fuel to make soot; then, though the funnel should be foul, yet the sparks have such a crooked up and down round about way to go, that they are out before they get at it.) I say, if ever it should be on fire, a turn of the register shuts all close, and prevents any air going into the chimney, and so the fire may easily be stifled and mastered.

The advantages of this Fire-place.

Its advantages above the common fire-places are,

1. That your whole room is equally warmed, so that people need not crowd so close round the fire, but may sit near the window, and have the benefit of the light for reading, writing, needle-work, &c. They may sit with comfort in any part of the room, which is a very considerable advantage in a large family, where there must often be two fires kept, because all cannot conveniently come at one.

2. If you sit near the fire, you have not that cold draught of uncomfortable air nipping your back and heels, as when before common fires, by which many catch cold, being scorched before, and, as it were, froze behind.

3. If you sit against a crevice, there is not that sharp draught of cold air playing on you, as in rooms where there are fires in the common way; by which many catch cold, whence proceed coughs,* catarrhs, tooth-aches, fevers, pleurisies, and many other diseases.

* The shutter is slid up and down in this manner, only in those fire-places which are so made as that the distance between the top of the arched opening, and the bottom plate, is the same as the distance between it and the top plate. Where the arch is higher, as it is in the draught annexed (which is agreeable to late improvements) the shutter is set by, and applied occasionally; because if it were made deep enough to close the whole opening when slid down, it would hide part of it when up.

* Lord Molesworth, in his account of Denmark, says, "That few or none of the people there are troubled with coughs, catarrhs, consumptions, or such like diseases of the lungs; so that in the midst of winter in the churches, which are very much frequented, there is no

4. In case of sickness, they make most excellent nursing rooms; as they constantly supply a sufficiency of fresh air, so warmed at the same time as to be no way inconvenient or dangerous. A small one does well in a chamber; and, the chimneys being fitted for it, it may be removed from one room to another, as occasion requires, and fixed in half an hour. The equal temper too, and warmth of the air of the room, is thought to be particularly advantageous in some distempers; for it was observed in the winters of 1730 and 1736, when the small-pox spread in Pennsylvania, that very few children of the Germans died of that distemper in proportion to those of the English; which was ascribed, by some, to the warmth and equal temper of air in their stove-rooms, which made the disease as favourable as it commonly is in the West Indies. But this conjecture we submit to the judgment of physicians.

5. In common chimneys, the strongest heat from the fire, which is upwards, goes directly up the chimney, and is lost; and there is such a strong draught into the chimney that not only the upright heat, but also the back, sides, and downward heats are carried up the chimney by that draught of air; and the warmth given before the fire, by the rays that strike out towards the room is continually driven back, crowded into the chimney, and carried up by the same draught of air. But here the upright heat strikes and heats the top plate, which warms the air above it, and that comes into the room. The heat likewise, which the fire communicates to the sides, back, bottom and air-box, is all brought into the room; for you will find a constant current of warm air coming out of the chimney-corner into the room. Hold a candle just under the mantelpiece, or breast of your chimney, and you will see the flame bent outwards; by laying a piece of smoking paper on the hearth, on either side, you may see how the current of air moves, and where it tends, for it will turn and carry the smoke with it.

6. Thus, as very little of the heat is lost, when this fire-place is used, *much less wood** will serve you, which is a considerable advantage where wood is dear.

7. When you burn candles near this fire-place, you will find that the flame burns quite upright, and does not blare and run the tallow down, by drawing towards the chimney, as against common fires.

8. This fire-place cures most smoky chimneys, and thereby preserves both the eyes and furniture.

9. It prevents the fouling of chimneys; much of the lint and dust that contributes to foul a chimney, being, by the low arch, obliged to pass through the flame, where it is consumed. Then, less wood being burnt, there is less smoke made. Again, the shutter, or trap-bellows, soon blowing the wood into a flame, the same wood does not yield so much smoke as if burnt in a common chimney; for as soon as flame begins, smoke in proportion ceases.

10. And if a chimney should be foul, it is much less likely to take fire. If it should take fire, it is easily stifled and extinguished.

11. A fire may be very speedily made in this fire-place by the help of the shutter or trap-bellows, as aforesaid.

12. A fire may be soon extinguished, by closing it with the shutter before, and turning the register behind, which will stifle it, and the brands will remain ready to rekindle.

13. The room being once warm, the warmth may be retained in it all night.

14. And lastly, the fire is so secured at night, that not one spark can fly out into the room to do damage.

With all these conveniences, you do not lose the pleasing sight nor use of the fire, as in the Dutch stoves, but may boil the tea-kettle, warm the flat-irons, heat heaters, keep warm a dish of victuals by setting it on the top, &c.

Objections answered.

There are some objections commonly made by people that are unacquainted with these fire-places, which it may not be amiss to endeavour to remove, as they arise from prejudices which might otherwise obstruct, in some degree, the general use of this beneficial machine. We frequently hear it said, *They are of the nature of Dutch stoves; stoves have an unpleasant smell; stoves are unwholesome; and, warm rooms make people tender, and apt to catch cold.*—As to the first, that they are of the nature of Dutch stoves, the description of those stoves, in the beginning of this paper, compared with that of these machines, shows, that there is a most material difference, and that these have vastly the advantage, if it were only in the single article of the admission and circulation of the fresh air. But it must be allowed there may have been some cause to complain of the offensive smell of iron stoves. This smell, however, never proceeded from the iron itself, which, in its nature, whether hot or cold, is one of the sweetest of metals, but from the

noise to interrupt the attention due to the preacher. I am persuaded (says he) their *warm stoves* contribute to their freedom from these kinds of maladies" page 91.

* People who have used these fire-places, differ much in their accounts of the wood saved by them. Some say five sixths, others three fourths, and others much less. This is owing to the great difference there was in their former fires; some (according to the different circumstances of their rooms and chimneys) having been used to make very large, others middling, and others, of a more sparing temper, very small ones: while in these fire-places, their size and draught being nearly the same, the consumption is more equal. I suppose, taking a number of families together, that two thirds, or half the wood, at least, is saved. My common room, I know, is made twice as warm as it used to be, with a quarter of the wood I formerly consumed there.

general uncleanly manner of using those stoves. If they are kept clean, they are as sweet as an ironing-box, which, though ever so hot, never offends the smell of the nicest lady: but it is common to let them be greased, by setting candlesticks on them, or otherwise; to rub greasy hands on them; and, above all to spit upon them, to try how hot they are, which is an inconsiderate, filthy, unmannerly custom, for the slimy matter of spittle drying on, burns and fumes when the stove is hot, as well as the grease, and smells most nauseously; which makes such close stove-rooms, where there is no draught to carry off those filthy vapours, almost intolerable to those that are not from their infancy accustomed to them. At the same time nothing is more easy than to keep them clean; for when by any accident they happen to be fouled, a lee made of ashes and water, with a brush, will scour them perfectly: as will also a little strong soft soap and water.

That hot iron of itself gives no offensive smell, those know very well who have (as the writer of this has) been present at a furnace when the workmen were pouring out the flowing metal to cast large plates, and not the least smell of it to be perceived. That hot iron does not, like lead, brass, and some other metals, give out unwholesome vapours, is plain from the general health and strength of those who constantly work in iron, as furnace-men, forge-men, and smiths; that it is in its nature a metal perfectly wholesome to the body of man, is known from the beneficial use of chalybeate or iron-mine-waters; from the good done by taking steel filings in several disorders; and that even the smithy water in which hot irons are quenched, is found advantageous to the human constitution.—The ingenious and learned Dr. Desaguliers, to whose instructive writings the contriver of this machine acknowledges himself much indebted, relates an experiment he made, to try whether heated iron would yield unwholesome vapours; he took a cube of iron, and having given it a very great heat, he fixed it so to a receiver, exhausted by the air-pump, that all the air rushing in to fill the receiver, should first pass through a hole in the hot iron. He then put a small bird into the receiver, who breathed that air without any inconvenience, or suffering the least disorder. But the same experiment being made with a cube of hot brass, a bird put into that air died in a few minutes. Brass, indeed, stinks, even when cold, and much more when hot; lead, too, when hot, yields a very unwholesome steam; but iron is always sweet, and every way taken is wholesome and friendly to the human body—except in weapons.

That warmed rooms make people tender, and apt to catch cold, is a mistake as great as it is (among the English) general. We have seen in the preceding pages how the common rooms are apt to give colds; but the writer of this paper may affirm from his own experience, and that of his family and friends who have used warm rooms for these four winters past, that by the use of such rooms, people are rendered *less liable* to take cold, and, indeed, *actually hardened*. If sitting warm in a room made one subject to take cold on going out, lying warm in bed should, by a parity of reason, produce the same effect when we rise. Yet we find we can leap out of the warmest bed naked, in the coldest morning, without any such danger; and in the same manner out of warm clothes into a cold bed. The reason is, that in these cases the pores all close at once, the cold is shut out, and the heat within augmented, as we soon after feel by the glowing of the flesh and skin. Thus no one was ever known to catch cold by the use of the cold bath; and are not cold baths allowed to harden the bodies of those that use them? Are they not therefore frequently prescribed to the tenderest constitutions?—Now every time you go out of a warm room into the cold freezing air, you do as it were plunge into a cold bath, and the effect is in proportion the same; for though perhaps you may feel somewhat chilly at first, you find in a little time your bodies hardened and strengthened, your blood is driven round with a brisker circulation, and a comfortable, steady, uniform inward warmth succeeds that equal outward warmth you first received in the room. Farther to confirm this assertion, we instance the Swedes, the Danes, and the Russians: these nations are said to live in rooms, compared to ours, as hot as ovens;* yet where are the hardy soldiers, though bred in their boasted cool houses, that can, like these people, bear the fatigues of a winter campaign in so severe a climate, march whole days to the neck in snow, and at night intrench in ice as they do?

The mentioning of those northern nations, puts me in mind of a considerable *public advantage* that may arise from the general use of these fire-places. It is observable, that though those countries have been well inhabited for many ages, wood is still their fuel,

*Mr. Boyle, in his experiments and observations upon cold, *Shaw's Abridgment*, Vol. I. p. 684, says, "It is remarkable, that while the cold has strange and tragical effects at Moscow and elsewhere, the Russians and Livonians should be exempt from them, who accustom themselves to pass immediately from a great degree of heat, to as great a one of cold, without receiving any visible prejudice thereby. I remember being told by a person of unquestionable credit, that it was a common practice among them, to go from a hot stove into cold water; the same was also affirmed to me by another who resided at Moscow. This tradition is likewise abundantly confirmed by Olearius."—"It is a surprising thing," says he, "to see how far the Russians can endure heat; and how, when it makes them ready to faint, they can go out of their stoves, stark naked, both men and women, and throw themselves into cold water; and even in winter wallow in the snow."

and yet at no very great price; which could not have been, if they had not universally used stoves, but consumed it as we do, in great quantities, by open fires. By the help of this saving invention our wood may grow as fast as we consume it, and our posterity may warm themselves at a moderate rate, without being obliged to fetch their fuel over the Atlantic; as, if pit-coal should not be here discovered (which is an uncertainty) they must necessarily do.*

We leave it to the *political arithmetician* to compute how much money will be saved to a country, by its spending two thirds less of fuel; how much labour saved in cutting and carriage of it; how much more land may be cleared by cultivation; how great the profit by the additional quantity of work done, in those trades particularly that do not exercise the body so much, but that the workfolks are obliged to run frequently to the fire to warm themselves: and to physicians to say, how much healthier thick-built towns and cities will be, now half suffocated with sulphury smoke, when so much less of that smoke shall be made, and the air breathed by the inhabitants be consequently so much purer. These things it will suffice just to have mentioned; let us proceed to give some necessary directions to the workman who is to fix or set up these fire-places.

Directions to the Bricklayer.

The chimney being first well swept and cleansed from soot, &c. lay the bottom plate down on the hearth, in the place where the fire-place is to stand, which may be as forward as the hearth will allow. Chalk a line from one of its back corners round the plate to the other corner, that you may afterwards knows its place when you come to fix it; and from those corners, two parallel lines to the back of the chimney: make marks also on each side, that you may know where the partition is to stand, which is to prevent any communication between the air and smoke. Then, removing the plate, make a hollow under it and beyond it, by taking up as many of the bricks or tiles as you can, within your chalked lines, quite to the chimney-back. Dig out six or eight inches deep of the earth or rubbish, all the breadth and length of your hollow; then make a passage of four inches square (if the place will allow so much) leading from the hollow to some place communicating with the outer air; by *outer air* we mean air without the room you intend to warm. This passage may be made to enter your hollow on either side, or in the fore part, just as you find most convenient, the circumstances of your chimney considered.—If the fire-place is to be put up in a chamber, you may have this communication of outer air from the staircase; or sometimes more easily from between the chamber floor, and the ceiling of the lower room, making only a small hole in the wall of the house entering the space betwixt those two joists with which your air-passage in the hearth communicates. If this air-passage be so situated as that mice may enter it, and nestle in the hollow, a little grate of wire will keep them out. This passage being made, and, if it runs under any part of the hearth, tiled over securely, you may proceed to raise your false back. This may be of four inches or two inches thickness, as you have room, but let it stand at least four inches from the true chimney-back. In narrow chimneys this false back runs from jamb to jamb, but in large old-fashioned chimneys, you need not make it wider than the back of the fire-place. To begin it, you may form an arch nearly flat, of three bricks end to end, over the hollow, to leave a passage the breadth of the iron fire-place, and five or six inches deep, rounding at bottom, for the smoke to turn and pass under the false back, and so behind it up the chimney. The false back is to rise till it is as high as the breast of the chimney, and then to close over the breast;* always observing, if there is a wooden mantel-tree, to close above it. If there is no wood in the breast, you may arch over and close even with the lower part of the breast. By this closing the chimney is made tight, that no air or smoke can pass up it, without going under the false back. Then from side to side of your hollow, against the marks you made with chalk, raise a tight partition, brick-on-edge, to separate the air from the smoke, bevelling away to half an inch the brick that comes just under the air-hole, that the air may have a free passage up into the air-box: lastly, close the hearth over that part of the hollow that is between the false back and the place of the bottom plate, coming about half an inch under the plate, which piece of hollow hearth may be supported by a bit or two of old iron-hoop; then is your chimney fitted to receive the fire-place.

To set it, lay first a little bed of mortar all round the edges of the hollow, and over the top of the partition: then lay down your bottom plate in its place (with the rods in it) and tread it till it lies firm. Then put a little fine mortar (made of loam and lime, with a little coarse hair) into its joints, and set in your back plate, leaning it for the present against the false back: then set in your air-box, with a little mortar in its joints; then put in the two sides, closing them up against the air-box, with mortar in their grooves, and fixing at the same

* Pitcoal has been discovered since in great abundance in various parts of the United States The mountains of Pennsylvania contain vast treasures, which only require canals and roads to convey them in quantities sufficient for the supply of the whole continent.

* See page 396, where the trap-door is described that ought to be in this closing.

time your register: then bring up your back to its place, with mortar in its grooves, and that will bind the sides together. Then put in your front plate, placing it as far back in the groove as you can, to leave room for the sliding plate: then lay on your top plate, with mortar in its grooves also, screwing the whole firmly together by means of the rods. The capital letters A B D E, &c. in the annexed cut, show the corresponding parts of the several plates. Lastly, the joints being pointed all around on the outside, the fire-place is fit for use.

When you make your first fire in it, perhaps if the chimney be thoroughly cold, it may not draw, the work too being all cold and damp. In such case, put first a few shovels of hot coals in the fire-place, then lift up the chimney-sweeper's trap-door, and putting in a sheet or two of flaming paper, shut it again, which will set the chimney a drawing immediately, and when once it is filled with a column of warm air, it will draw strongly and continually.

The drying of the mortar and work by the first fire may smell unpleasantly, but that will soon be over.

In some shallow chimneys, to make more room for the false back and its flue, four inches or more of the chimney back may be picked away.

Let the room be made as tight as conveniently it may be, so will the outer air, that must come in to supply the room and draught of the fire, be all obliged to enter through the passage under the bottom plate, and up through the air-box, by which means it will not come cold to your backs, but be warmed as it comes in, and mixed with the warm air round the fire-place, before it spreads in the room.

But as a great quantity of cold air, in extreme cold weather especially, will presently enter a room if the door be carelessly left open, it is good to have some contrivance to shut it, either by means of screw hinges, a spring, or a pulley.

When the pointing in the joints is all dry and hard, get some powder of black lead (broken bits of black lead crucibles from the silversmiths, pounded fine, will do) and mixing it with a little rum and water, lay it on, when the plates are warm, with a hard brush, over the top and front plates, part of the side and bottom plates, and over all the pointing; and, as it dries, rub it to a gloss with the same brush, so the joints will not be discerned, but it will look all of a piece, and shine like new iron. And the false back being plastered and white-washed, and the hearth reddened, the whole will make a pretty appearance. Before the black lead is laid on, it would not be amiss to wash the plates with strong lee and a brush, or soap and water, to cleanse them from any spots of grease or filth that may be on them. If any grease should afterwards come on them, a little wet ashes will get it out.

If it be well set up, and in a tolerable good chimney, smoke will draw in from as far as the fore part of the bottom plate, as you may try by a bit of burning paper.

People are at first apt to make their rooms too warm, not imagining how little a fire will be sufficient. When the plates are no hotter than that one may just bear the hand on them, the room will generally be as warm as you desire it.

Soon after the foregoing piece was published, some persons in England, in imitation of Dr. Franklin's invention, made what they call Pennsylvanian Fire-Places, with improvements; *the principal of which pretended improvements is, a contraction of the passages in the air-box, originally designed for admitting a quantity of fresh air, and warming it as it entered the room. The contracting these passages gains indeed more room for the grate, but in a great measure defeats their intention. For if the passages in the air-box do not greatly exceed in dimensions the amount of all the crevices by which cold air can enter the room, they will not considerably prevent, as they were intended to do, the entry of cold air through these crevices.*

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*To Dr. Ingenhausz, Physician to the Emperor, at Vienna.**

On the Causes and Cure of Smoky Chimneys.—Read in the American Philosophical Society, Oct. 21, 1785.

At Sea, Aug. 28, 1785.

Dear Friend,—In one of your letters, a little before I left France, you desired me to give you in writing my thoughts upon the construction and use of chimneys, a subject you had sometimes heard me touch upon in conversation. I embrace willingly this leisure afforded by my present situation to comply with your request, as it will not only show my regard to the desires of a friend, but may at the same time be of some utility to others; the doctrine of chimneys appearing not to be as yet generally well understood, and mistakes respecting them being attended with constant inconvenience, if not not remedied, and with fruitless expense, if the true remedies are mistaken.

Those who would be acquainted with this subject should begin by considering on what principle smoke ascends in any chimney. At first many are apt to think that smoke is in

* This letter has been published in a separate pamphlet, in Germany, England, and America; it has also appeared in the Transactions of the American Philosophical Society.

its nature and of itself specifically lighter than air, and rises in it for the same reason that cork rises in water. These see no case why smoke should not rise in the chimney, though the room be ever so close. Others think there is a power in chimneys to *draw* up the smoke, and that there are different forms of chimneys which afford more or less of this power. These amuse themselves with searching for the best form. The equal dimensions of a funnel in its whole length is not thought artificial enough, and it is made, for fancied reasons, sometimes tapering and narrowing from below upwards, and sometimes the contrary, &c. A simple experiment or two may serve to give more correct ideas. Having lit a pipe of tobacco, plunge the stem to the bottom of a decanter half filled with cold water; then putting a rag over the bowl, blow through it and make the smoke descend in the stem of the pipe, from the end of which it will rise in bubbles through the water; and being thus cooled, will not afterwards rise to go out through the neck of the decanter, but remain spreading itself and resting on the surface of the water. This shows that smoke is really heavier than air, and that it is carried upwards only when attached to, or acted upon, by air that is heated, and thereby rarefied and rendered specifically lighter than the air in its neighbourhood.

Smoke being rarely seen but in company with heated air, and its upward motion being visible, though that of the rarefied air that drives it is not so, has naturally given rise to the error.

I need not explain to you, my learned friend, what is meant by rarefied air; but if you make the public use you propose of this letter, it may fall into the hands of some who are unacquainted with the term and with the thing. These then may be told, that air is a fluid which has weight as well as others, though about eight hundred times lighter than water. That heat makes the particles of air recede from each other and take up more space, so that the same weight of air heated will have more bulk, than equal weights of cold air which may surround it, and in that case must rise, being forced upwards by such colder and heavier air, which presses to get under it and take its place. That air is so rarefied or expanded by heat may be proved to their comprehension, by a lank blown bladder, which, laid before a fire, will soon swell, grow tight, and burst.

Another experiment may be to take a glass tube about an inch in diameter, and twelve inches long, open at both ends and fixed upright on legs, so that it need not be handled, for the hands might warm it. At the end of a quill fasten five or six inches of the finest light filament of silk, so that it may be held either above the upper end of the tube or under the lower end, your warm hand being at a distance by the length of the quill. (See the plate, fig. 1.) If there were any motion of air through the tube, it would manifest itself by its effect on the silk; but if the tube and the air in it are of the same temperature with the surrounding air, there will be no such motion, whatever may be the form of the tube, whether crooked or strait, narrow below and widening upwards, or the contrary; the air in it will be quiescent. Warm the tube, and you will find, as long as it continues warm, a constant current of air entering below and passing up through it, till discharged at the top; because the warmth of the tube being communicated to the air it contains, rarefies that air and makes it lighter than the air without, which therefore presses in below, forces it upwards, and follows and takes its place, and is rarefied in its turn. And, without warming the tube, if you hold under it a knob of hot iron, the air thereby heated will rise and fill the tube, going out at its top, and this motion in the tube will continue as long as the knob remains hot, because the air entering the tube below is heated and rarefied by passing near and over that knob.

That this motion is produced merely by the difference of specific gravity between the fluid within and that without the tube, and not by any fancied form of the tube itself, may appear by plunging it into water contained in a glass jar a foot deep, through which such motion might be seen. The water within and without the tube being of the same specific gravity, balance each other, and both remain at rest. But take out the tube, stop its bottom with a finger and fill it with olive oil, which is lighter than water, then stopping the top, place it as before, its lower end under water, its top a very little above. As long as you keep the bottom stopt, the fluids remain at rest, but the moment it is unstopt, the heavier enters below, forces up the lighter, and takes its place. And the motion then ceases, merely because the new fluid cannot be successively made lighter, as air may be by a warm tube.

In fact, no form of the funnel of a chimney has any share in its operation or effect respecting smoke, except its height. The longer the funnel, if erect, the greater its force when filled with heated and rarefied air, to *draw* in below and drive up the smoke, if one may, in compliance with custom, use the expression *draw*, when in fact it is the superior weight of the surrounding atmosphere that *presses* to enter the funnel below, and so *drives up* before it the smoke and warm air it meets with in its passage.

I have been the more particular in explaining these first principles, because, for want of clear ideas respecting them, much fruitless expense has been occasioned; not only single chimneys, but in some instances, within my

knowledge, whole stacks having been pulled down and rebuilt with funnels of different forms, imagined more powerful in *drawing* smoke; but having still the same height and the same opening below, have performed no better than their predecessors.

What is it then which makes a *smoky chimney*, that is, a chimney which, instead of conveying up all the smoke, discharges a part of it into the room, offending the eyes and damaging the furniture?

The causes of this effect, which have fallen under my observation, amount to *nine*, differing from each other, and therefore requiring different remedies.

1. *Smoky chimnies in a new house, are such, frequently from mere want of air.* The workmanship of the rooms being all good, and just out of the workman's hand, the joints of the boards of the flooring, and of the pannels of wainscoting are all true and tight, the more so as the walls, perhaps not yet thoroughly dry, preserve a dampness in the air of the room which keeps the wood-work swelled and close. The doors and the sashes too, being worked with truth, shut with exactness, so that the room is as tight as a snuff box, no passage being left open for air to enter, except the key-hole, and even that is sometimes covered by a little dropping shutter. Now if smoke cannot rise but as connected with rarefied air, and a column of such air, suppose it filling the funnel, cannot rise, unless other air be admitted to supply its place; and if, therefore, no current of air enter the opening of the chimney, there is nothing to prevent the smoke coming out into the room. If the motion upwards of the air in a chimney that is freely supplied, be observed by the raising of the smoke or a feather in it, and it be considered that in the time such feather takes in rising from the fire to the top of the chimney, a column of air equal to the content of the funnel must be discharged, and an equal quantity supplied from the room below, it will appear absolutely impossible that this operation should go on if the tight room is kept shut; for were there any force capable of drawing constantly so much air out of it, it must soon be exhausted like the receiver of an air-pump, and no animal could live in it. Those therefore who stop every crevice in a room to prevent the admission of fresh air, and yet would have their chimney carry up the smoke, require inconsistencies, and expect impossibilities. Yet under this situation, I have seen the owner of a new house, in despair, and ready to sell it for much less than it cost, conceiving it uninhabitable, because not a chimney in any one of its rooms would carry off the smoke, unless a door or window were left open. Much expense has also been made, to alter and amend new chimneys which had really no fault; in one house particularly that I knew, of a nobleman in Westminster, that expense amounted to no less than three hundred pounds, *after* his house had been, as he thought, finished, and all charges paid. And after all, several of the alterations were ineffectual, for want of understanding the true principles.

Remedies. When you find on trial, that opening the door or a window, enables the chimney to carry up all the smoke, you may be sure that want of air *from without*, was the cause of its smoking. I say *from without*, to guard you against a common mistake of those who may tell you, the room is large, contains abundance of air, sufficient to supply any chimney, and therefore it cannot be that the chimney wants air. These reasoners are ignorant, that the largeness of a room, if tight, is in this case of small importance, since it cannot part with a chimney full of air without occasioning so much vacuum; which it requires a great force to effect, and could not be borne if effected.

It appearing plainly, then, that some of the outward air must be admitted, the question will be, how much is *absolutely necessary*; for you would avoid admitting more, as being contrary to one of your intentions in having a fire, viz. that of warming your room. To discover this quantity, shut the door gradually while a middling fire is burning, till you find that, before it is quite shut, the smoke begins to come out into the room, then open it a little till you perceive the smoke comes out no longer. There hold the door, and observe the width of the open crevice between the edge of the door and the rabbit it should shut into. Suppose the distance to be half an inch, and the door eight feet high, you find thence that your room requires an entrance for air equal in area to ninety-six half inches, or forty-eight square inches, or a passage of six inches by eight. This, however, is a large supposition, there being few chimneys, that, having a moderate opening and a tolerable height of funnel, will not be satisfied with such a crevice of a quarter of an inch; and I have found a square of six by six, or thirty-six square inches, to be a pretty good medium that will serve for most chimneys. High funnels, with small and low openings, may indeed be supplied through a less space, because for reasons that will appear hereafter, the *force of levity*, if one may so speak, being greater in such funnels, the cool air enters the room with greater velocity, and consequently more enters in the same time.—This however has its limits, for experience shows, that no increased velocity, so occasioned, has made the admission of air through the key-hole equal in quantity to that through an open door; though through the door the current moves slowly, and through the keyhole with great rapidity.

It remains then to be considered how and where this necessary quantity of air from with-

out is to be admitted so as to be least inconvenient. For if at the door, left so much open, the air thence proceeds directly to the chimney, and in its way comes cold to your back and heels as you sit before your fire. If you keep the door shut, and raise a little the sash of your window, you feel the same inconvenience. Various have been the contrivances to avoid this, such as bringing in fresh air through pipes in the jambs of the chimney, which, pointing upwards, should blow the smoke up the funnel; opening passages into the funnel above, to let in air for the same purpose. But these produce an effect contrary to that intended; for as it is the constant current of air passing from the room *through the opening of the chimney* into the funnel which prevents the smoke coming out into the room, if you supply the funnel by other means or in other ways with the air it wants, and especially if that air be cold, you diminish the force of that current, and the smoke in its effort to enter the room finds less resistance.

The wanted air must then *indispensably* be admitted into the room, to supply what goes off through the opening of the chimney. M. Gauger, a very ingenious and intelligent French writer on the subject, proposes with judgment to admit it *above* the opening of the chimney; and to prevent inconvenience from its coldness, he directs its being made to pass in its entrance through winding cavities made behind the iron back and sides of the fireplace, and under the iron hearth-plate; in which cavities it will be warmed; and even heated, so as to contribute much, instead of cooling, to the warming of the room. This invention is excellent in itself, and may be used with advantage in building new houses; because the chimney may then be so disposed as to admit conveniently the cold air to enter such passages: but in houses built without such views, the chimneys are often so situated as not to afford that convenience, without great and expensive alterations. Easy and cheap methods, though not quite so perfect in themselves, are of more general utility; and such are the following.

In all rooms where there is a fire, the body of air warmed and rarefied before the chimney is continually changing place, and making room for other air that is to be warmed in its turn. Part of it enters and goes up the chimney, and the rest rises and takes place near the ceiling. If the room be lofty, that warm air remains above our heads as long as it continues warm, and we are little benefited by it, because it does not descend till it is cooler. Few can imagine the difference of climate between the upper and lower parts of such a room, who have not tried it by the thermometer, or by going up a ladder till their heads are near the ceiling. It is then among this warm air that the wanted quantity of outward air is best admitted, with which being mixed, its coldness is abated, and its inconvenience diminished so as to become scarce observable. This may be easily done, by drawing down about an inch the upper sash of a window; or, if not moveable, by cutting such a crevice through its frame; in both which cases, it will be well to place a thin shelf of the length, to conceal the opening, and sloping upwards to direct the entering air horizontally along and under the ceiling. In some houses the air may be admitted by such a crevice made in the wainscot, cornish, or plastering, near the ceiling and over the opening of the chimney. This, if practicable, is to be chosen, because the entering cold air will there meet with the warmest rising air from before the fire, and be soonest tempered by the mixture. The same kind of shelf should also be placed here. Another way, and not a very difficult one, is to take out an upper pane of glass in one of your sashes, set in a tin frame, (Plate, Fig. 2.) giving it two springing angular sides, and then replacing it, with hinges below on which it may be turned to open more or less above. It will then have the appearance of an internal skylight. By drawing this pane in, more or less, you may admit what air you find necessary. Its position will naturally throw that air up and along the ceiling. This is what is called in France a *Was ist das?* As this is a German question, the invention is probably of that nation, and takes its name from the frequent asking of that question when it first appeared. In England, some have of late years cut a round hole about five inches diameter in a pane of the sash and placed against it a circular plate of tin hung on an axis, and cut into vanes, which, being separately bent a little obliquely, are acted upon by the entering air, so as to force the plate continually round like the vanes of a windmill. This admits the outward air, and by the continual whirling of the vanes, does in some degree disperse it. The noise only, is a little inconvenient.

2. A second cause of the smoking of chimneys is, *their openings in the room being too large;* that is, too wide, too high, or both. Architects in general have no other ideas of proportion in the opening of a chimney, than what relate to symmetry and beauty, respecting the dimensions of the room:* while its true proportion, respecting its function and utility, depends on quite other principles; and they might as properly proportion the step in a stair-case to the height of the story, instead of the natural elevation of men's legs in mounting. The proportion then to be regarded, is what relates to the height of the funnel. For as the funnels in the different stories of

* See Notes at the end of this paper, No. I.

a house are necessarily of different heights or lengths, that from the lowest floor being the highest or longest, and those of the other floors shorter and shorter, till we come to those in the garrets, which are of course the shortest: and the force of draft being, as already said, in proportion to the height of funnel filled with rarefied air; and a current of air from the room into the chimney, sufficient to fill the opening, being necessary to oppose and prevent the smoke coming out into the room; it follows, that the openings of the longest funnels may be larger, and that those of the shorter funnels should be smaller. For if there be a large opening to a chimney that does not draw strongly, the funnel may happen to be furnished with the air it demands by a partial current entering on one side of the opening, and, leaving the other side free of any opposing current, may permit the smoke to issue there into the room. Much too of the force of draft in a funnel depends on the degree of rarefaction in the air it contains, and that depends on the nearness to the fire of its passage in entering the funnel. If it can enter far from the fire on each side, or far above the fire, in a wide or high opening, it receives little heat in passing by the fire, and the contents of the funnel is by that means less different in levity from the surrounding atmosphere, and its force in drawing consequently weaker. Hence if too large an opening be given to chimneys in upper rooms, those rooms will be smoky: on the other hand, if too small openings be given to chimneys in the lower rooms, the entering air, operating too directly and violently on the fire, and afterwards strengthening the draft as it ascends the funnel, will consume the fuel too rapidly.

Remedy. As different circumstances frequently mix themselves in these matters, it is difficult to give precise dimensions for the openings of all chimneys. Our fathers made them generally much too large; we have lessened them; but they are often still of greater dimension than they should be, the human eye not being easily reconciled to sudden and great changes. If you suspect that your chimney smokes from the too great dimension of its opening, contract it by placing moveable boards so as to lower and narrow it gradually, till you find the smoke no longer issues into the room. The proportion so found will be that which is proper for that chimney, and you may employ the bricklayer or mason to reduce it accordingly. However, as, in building new houses, something must be sometimes hazarded, I would make the openings in my lower rooms about thirty inches square and eighteen deep, and those in the upper, only eighteen inches square and not quite so deep; the intermediate ones diminishing in proportion as the height of funnel diminished. In the larger opening, billets of two feet long, or half the common length of cordwood, may be burnt conveniently; and for the smaller, such wood may be sawed into thirds. Where coals are the fuel, the grates will be proportioned to the openings. The same depth is nearly necessary to all, the funnels being all made of a size proper to admit a chimney-sweeper. If in large and elegant rooms custom or fancy should require the appearance of a large chimney, it may be formed of extensive marginal decorations, in marble, &c. In time, perhaps, that which is fittest in the nature of things may come to be thought handsomest. But at present, when men and women in different countries show themselves dissatisfied with the forms God has given to their heads, waists, and feet, and pretend to shape them more perfectly, it is hardly to be expected that they will be content always with the best form of a chimney. And there are some, I know, so bigoted to the fancy of a large noble opening, that rather than change it, they would submit to have damaged furniture, sore eyes, and skins almost smoked to bacon.

3. Another cause of smoky chimneys is, *too short a funnel.* This happens necessarily in some cases, as where a chimney is required in a low building; for if the funnel be raised high above the roof, in order to strengthen its draft, it is then in danger of being blown down, and crushing the roof in its fall.

Remedies. Contract the opening of the chimney, so as to oblige all the entering air to pass through or very near the fire; whereby it will be more heated and rarefied, the funnel itself be more warmed, and its contents have more of what may be called the force of levity, so as to rise strongly and maintain a good draft at the opening.

Or you may in some cases, to advantage, build additional stories over the low building which will support a high funnel.

If the low building be used as a kitchen, and a contraction of the opening therefore inconvenient, a large one being necessary, at least when there are great dinners, for the free management of so many cooking utensils; in such case I would advise the building of two more funnels joining to the first, and having three moderate openings, one to each funnel, instead of one large one. When there is occasion to use but one, the other two may be kept shut by sliding plates, hereafter to be described;* and two or all of them may be used together when wanted. This will indeed be an expense, but not an useless one, since your cooks will work with more comfort, see better than in a smoky kitchen what they are about, your victuals will be cleaner dressed, and not taste of smoke, as is often

* See Notes at the end of this paper, No. II.

the case; and to render the effect more certain, a stack of three funnels may be safely built higher above the roof than a single funnel.

The case of two short a funnel is more general than would be imagined, and often found where one would not expect it. For it is not uncommon, in ill-contrived buildings, instead of having a funnel for each room or fire-place, to bend and turn the funnel of an upper room so as to make it enter the side of another funnel that comes from below. By this means the upper room funnel is made short of course, since its length can only be reckoned from the place where it enters the lower room funnel; and that funnel is also shortened by all the distance between the entrance of the second funnel and the top of the stack; for all that part being readily supplied with air through the second funnel, adds no strength to the draught, especially as that air is cold where there is no fire in the second chimney. The only easy remedy here is, to keep the opening shut of that funnel in which there is no fire.

4. Another very common cause of the smoking of chimneys, is, *their overpowering one another*. For instance, if there be two chimneys in one large room, and you make fires in both of them, the doors and windows close shut, you will find that the greater and stronger fire shall overpower the weaker, and draw air down its funnel to supply its own demand; which air descending in the weaker funnel will drive down its smoke, and force it into the room. If, instead of being in one room, the two chimneys are in two different rooms, communicating by a door, the case is the same whenever that door is open. In a very tight house, I have known a kitchen chimney on the lowest floor, when it had a great fire in it, overpower any other chimney in the house, and draw air and smoke into its room, as often as the door was opened communicating with the staircase.

Remedy. Take care that every room has the means of supplying itself from without, with the air its chimney may require, so that no one of them may be obliged to borrow from another, nor under the necessity of lending. A variety of these means have been already described.

5. Another cause of smoking is, *when the tops of chimneys are commanded by higher buildings, or by a hill*, so that the wind blowing over such eminences falls like water over a dam, sometimes almost perpendicularly on the tops of the chimneys that lie in its way, and beats down the smoke contained in them.

Remedy. That commonly applied to this case, is a turncap made of tin or plate iron, covering the chimney above and on three sides, open on one side, turning on a spindle, and which, being guided or governed by a vane, always presents it back to the current. This I believe may be generally effectual, though not certain, as there may be cases in which it will not succeed. Raising your funnels, if practicable, so as their tops may be higher, or at least equal with the commanding eminence, is more to be depended on. But the turning cap, being easier and cheaper, should first be tried. If obliged to build in such a situation, I would choose to place my doors on the side next the hill, and the backs of my chimneys on the furthest side; for then the column of air falling over the eminence, and of course pressing on that below, and forcing it to enter the doors, or *Was-ist-dases* on that side, would tend to balance the pressure down the chimneys, and leave the funnels more free in the exercise of their functions.

6. There is another case of command, the reverse of that last mentioned. It is where the commanding eminence is farther from the wind than the chimney commanded. To explain this a figure may be necessary. Suppose then a building whose side A happens to be exposed to the wind, and forms a kind of dam against its progress. (Plate, figure 3.) The air obstructed by this dam will, like water, press and search for passages through it; and finding the top of the chimney B, below the top of the dam, it will force itself down that funnel in order to get through by some door or window open on the side of the building. And if there be a fire in such chimney, its smoke is of course beat down, and fills the room.

Remedy. I know of but one, which is to raise such funnel higher than the roof, supporting it, if necessary, by iron bars. For a turn-cap in this case has no effect, the dammed up air pressing down through it in whatever position the wind may have placed its opening.

I know a city in which many houses are rendered smoky by this operation. For their kitchens being built behind, and connected by a passage with the houses, and the tops of the kitchen chimneys lower than the top of the houses, the whole side of a street, when the wind blows against its back, forms such a dam as above described; and the wind, so obstructed, forces down those kitchen chimneys (especially when they have but weak fires in them) to pass through the passage and house into the street. Kitchen chimneys, so formed and situated, have another inconvenience. In summer, if you open your upper room windows for air, a light breeze blowing over your kitchen chimney towards the house, though not strong enough to force down its smoke as aforesaid, is sufficient to waft it into your windows, and fill the rooms with it; which, besides the disagreeableness, damages your furniture.

7. Chimneys, otherwise drawing well, are

sometimes made to smoke by *the improper and inconvenient situation of a door.* When the door and chimney are on the same side of the room as in the figure, if the door A, being in the corner, is made to open against the wall (Plate, figure 4) which is common, as being there, when open, more out of the way, it follows, that when the door is only opened in part, a current of air rushing in passes along the wall into and across the opening of the chimney B, and flirts some of the smoke out into the room. This happens more certainly when the door is shutting, for then the force of the current is augmented, and becomes very inconvenient to those who, warming themselves by the fire, happen to sit in its way.

The *remedies* are obvious and easy. Either put an intervening skreen from the wall round great part of the fire-place; or, which is perhaps preferable, shift the hinges of your door, so as it may open the other way, and when open throw the air along the other wall.

8. A room, that has no fire in its chimney, is sometimes filled with *smoke which is received at the top of its funnel and descends into the room.* In a former paper* I have already explained the descending currents of air in cold funnels; it may not be amiss however to repeat here, that funnels without fires have an effect, according to their degree of coldness or warmth, on the air that happens to be contained in them. The surrounding atmosphere is frequently changing its temperature; but stacks of funnels, covered from winds and sun by the house that contains them, retain a more equal temperature. If, after a warm season, the outward air suddenly grows cold, the empty warm funnels begin to draw strongly upward; that is, they rarefy the air contained in them, which of course rises, cooler air enters below to supply its place, is rarefied in its turn and rises; and this operation continues till the funnel grows cooler, or the outward air warmer, or both, when the motion ceases. On the other hand, if after a cold season, the outward air suddenly grows warm and of course lighter, the air contained in the cool funnels, being heavier, descends into the room; and the warmer air which enters their tops being cooled in its turn, and made heavier, continues to descend; and this operation goes on till the funnels are warmed by the passing of warm air through them, or the air itself grows cooler. When the temperature of the air and of the funnels is nearly equal, the difference of warmth in the air between day and night is sufficient to produce these currents, the air will begin to ascend the funnels as the cool of the evening comes on, and this current will continue till perhaps nine or ten o'clock the next morning, when it begins to hesitate; and as the heat of the day approaches, it sets downwards, and continues so till towards evening, when it again hesitates for some time, and then goes upwards constantly during the night, as before mentioned. Now when smoke issuing from the tops of neighbouring funnels passes over the tops of funnels which are at the time drawing downwards, as they often are in the middle part of the day, such smoke is of necessity drawn into these funnels, and descends with the air into the chamber.

The *remedy* is to have a sliding plate, hereafter described,* that will shut perfectly the offending funnel.

9. Chimneys which generally draw well, do nevertheless sometimes give smoke into the rooms, *it being driven down by strong winds passing over the tops of their funnels*, though not descending from any commanding eminence. This case is most frequent where the funnel is short, and the opening turned from the wind. It is the more grievous, when it happens to be a cold wind that produces the effect, because when you most want your fire, you are sometimes obliged to extinguish it. To understand this, it may be considered, that the rising light air, to obtain a free issue from the funnel, must push out of its way or oblige the air that is over it to rise. In a time of calm or of little wind this is done visibly, for we see the smoke that is brought up by that air rise in a column above the chimney. But when a violent current of air, that is, a strong wind, passes over the top of a chimney, its particles have received so much force, which keeps them in a horizontal direction and follow each other so rapidly, that the rising light air has not strength sufficient to oblige them to quit that direction and move upwards to permit its issue. Add to this, that some of the current passing over that side of the funnel which it first meets with, viz. at A, (Plate, figure 5.) having been compressed by the resistance of the funnel, may expand itself over the flue, and strike the interior opposite side at B, from whence it may be reflected downwards and from side to side in the direction of the pricked lines c c c.

Remedies. In some places, particularly in Venice, where they have not stacks of chimneys but single flues, the custom is, to open or widen the top of the flue rounding in the true form of a funnel; (Plate, figure 6) which some think may prevent the effect just mentioned, for that the wind blowing over one of the edges into the funnel may be slanted out again on the other side by its form. I have had no experience of this; but I have lived in a windy country, where the contrary is practised, the tops of the flues being *narrowed* inwards, so as to form a slit for the issue of the smoke,

* See Notes at the end of this paper, No. II.

* See Notes at the end of this paper, No. II.

long as the breadth of the funnel, and only four inches wide. This seems to have been contrived on a supposition, that the entry of the wind would thereby be obstructed, and perhaps it might have been imagined, that the whole force of the rising warm air being condensed, as it were, in the narrow opening, would thereby be strengthened, so as to overcome the resistance of the wind. This however did not always succeed; for when the wind was at north-east and blew fresh, the smoke was forced down by fits into the room I commonly sat in, so as to oblige me to shift the fire into another. The position of the slit of this funnel was indeed north-east and south-west. Perhaps if it had lain across the wind, the effect might have been different. But on this I can give no certainty. It seems a matter proper to be referred to experiment. Possibly a turn-cap might have been serviceable, but it was not tried.

Chimneys have not been long in use in England. I formerly saw a book printed in the time of queen Elizabeth, which remarked the then modern improvements of living, and mentioned among others the convenience of chimneys. "Our forefathers," said the author, "had no chimneys. There was in each dwelling house only one place for a fire, and the smoke went out through a hole in the roof; but now there is scarce a gentleman's house in England that has not at least one chimney in it."—When there was but one chimney, its top might then be opened as a funnel, and perhaps, borrowing the form from the Venetians, it was then the flue of a chimney got that name. Such is now the growth of luxury, that in both England and France we must have a chimney for every room, and in some houses every possessor of a chamber, and almost every servant, will have a fire; so that the flues being necessarily built in stacks, the opening of each as a funnel is impracticable. This change of manners soon consumed the firewood of England, and will soon render fuel extremely scarce and dear in France, if the use of coals be not introduced in the latter kingdom, as it has been in the former, where it at first met with opposition; for there is extant in the records of one of queen Elizabeth's parliaments, a motion made by a member, reciting, "That many dyers, brewers, smiths, and other artificers of London, had of late taken to the use of pitcoal for their fires, instead of wood, which filled the air with noxious vapours and smoke, very prejudicial to the health, particularly of persons coming out of the country; and therefore moving that a law might pass to prohibit the use of such fuel (at least during the session of parliament) by those artificers."—It seems it was not then commonly used in private houses. Its supposed unwholesomeness was an objection. Luckily the inhabitants of London have got over that objection, and now think it rather contributes to render their air salubrious, as they have had no general pestilential disorder since the general use of coals, when, before it, such were frequent. Paris still burns wood at an enormous expense, continually augmenting, the inhabitants having still that prejudice to overcome. In Germany you are happy in the use of stoves, which save fuel wonderfully: your people are very ingenious in the management of fire; but they may still learn something in that art from the Chinese,* whose country being greatly populous and fully cultivated, has little room left for the growth of wood, and having not much other fuel that is good, have been forced upon many inventions during a course of ages, for making a little fire go as far as possible.

I have thus gone through all the common causes of the smoking of chimneys that I can at present recollect as having fallen under my observation; communicating the remedies that I have known successfully used for the different cases, together with the principles on which both the disease and the remedy depend, and confessing my ignorance wherever I have been sensible of it. You will do well, if you publish, as you propose, this letter, to add in notes, or as you please, such observations as may have occurred to your attentive mind; and if other philosophers will do the same, this part of science, though humble, yet of great utility, may in time be perfected. For many years past, I have rarely met with a case of a smoky chimney, which has not been solvable on these principles, and cured by these remedies, where people have been willing to apply them; which is indeed not always the case; for many have prejudices in favour of the nostrums of pretending chimney doctors and fumists, and some have conceits and fancies of their own, which they rather choose to try, than to lengthen a funnel, alter the size of an opening, or admit air into a room, however necessary; for some are as much afraid of fresh air as persons in the hydrophobia are of fresh water. I myself had formerly this prejudice, this *aerophobia*, as I now account it, and dreading the supposed dangerous effects of cool air, I considered it as an enemy, and closed with extreme care every crevice in the rooms I inhabited. Experience has convinced me of my error. I now look upon fresh air as a friend: I even sleep with an open window. I am persuaded that no common air from without is so unwholesome as the air within a close room that has been often breathed and not changed. Moist air too, which formerly I thought pernicious, gives me now no apprehensions: for considering that no dampness of air applied to the outside of my skin can be equal to what

* See Notes at the end of this paper, No. III.

is applied to and touches it within, my whole body being full of moisture, and finding that I can lie two hours in a bath twice a week, covered with water, which certainly is much damper than any air can be, and this for years together, without catching cold, or being in any other manner disordered by it, I no longer dread mere moisture, either in air or in sheets or shirts: and I find it of importance to the happiness of life, the being freed from vain terrors, especially of objects that we are every day exposed inevitably to meet with. You physicians have of late happily discovered, after a contrary opinion had prevailed some ages, that fresh and cool air does good to persons in the small pox and other fevers. It is to be hoped, that in another century or two we may all find out, that it is not bad even for people in health. And as to moist air, here I am at this present writing in a ship with above forty persons, who have had no other but moist air to breathe for six weeks past; every thing we touch is damp, and nothing dries, yet we are all as healthy as we should be on the mountains of Switzerland, whose inhabitants are not more so than those of Bermuda or St. Helena, islands on whose rocks the waves are dashed into millions of particles, which fill the air with damp, but produce no diseases, the moisture being pure, unmixed with the poisonous vapours arising from putrid marshes and stagnant pools, in which many insects die and corrupt the water. These places only, in my opinion (which however I submit to yours) afford unwholesome air; and that it is not the mere water contained in damp air, but the volatile particles of corrupted animal matter mixed with that water, which renders such air pernicious to those who breathe it. And I imagine it a cause of the same kind that renders the air in close rooms, where the perspirable matter is breathed over and over again by a number of assembled people, so hurtful to health. After being in such a situation, many find themselves affected by that *febricula*, which the English alone call *a cold*, and perhaps from the name, imagine that they caught the malady by *going out* of the room, when it was in fact by being in it.

You begin to think that I wander from my subject, and go out of my depth. So I return again to my chimneys.

We have of late many lectures in experimental philosophy. I have wished that some of them would study this branch of that science, and give experiments in it as a part of their lectures. The addition to their present apparatus need not be very expensive. A number of little representations of rooms composed each of five panes of sash glass, framed in wood at the corners, with proportionable doors, and moveable glass chimneys, with openings of different sizes, and different lengths of funnel, and some of the rooms so contrived as to communicate on occasion with others, so as to form different combinations, and exemplify different cases; with quantities of green wax taper cut into pieces of an inch and half, sixteen of which stuck together in a square, and lit, would make a strong fire for a little glass chimney, and blown out would continue to burn and give smoke as long as desired. With such an apparatus all the operations of smoke and rarefied air in rooms and chimneys might be seen through their transparent sides; and the effect of wind on chimneys, commanded or otherwise, might be shown by letting the entering air blow upon them through an opened window of the lecturer's chamber, where it would be constant while he kept a good fire in his chimney. By the help of such lectures our fumists would become better instructed. At present they have generally but one remedy, which perhaps they have known effectual in some one case of smoky chimneys, and they apply that indiscriminately to all the other causes, without success,—but not without expense to their employers.

With all the science, however, that a man shall suppose himself possessed of in this article, he may sometimes meet with cases that may puzzle him. I once lodged in a house at London, which, in a little room, had a single chimney and funnel. The opening was very small, yet it did not keep in the smoke, and all attempts to have a fire in this room were fruitless. I could not imagine the reason, till at length observing that the chamber over it, which had no fire-place in it, was always filled with smoke when a fire was kindled below, and that the smoke came through the cracks and crevices of the wainscot; I had the wainscot taken down, and discovered that the funnel which went up behind it, had a crack many feet in length, and wide enough to admit my arm, a breach very dangerous with regard to fire, and occasioned probably by an apparent irregular settling of one side of the house. The air entering this breach freely, destroyed the drawing force of the funnel. The remedy would have been, filling up the breach or rather rebuilding the funnel: but the landlord rather chose to stop up the chimney.

Another puzzling case I met with at a friend's country house near London. His best room had a chimney in which, he told me, he never could have a fire, for all the smoke came out into the room. I flattered myself I could easily find the cause, and prescribe the cure. I had a fire made there, and found it as he said. I opened the door, and perceived it was not want of air. I made a temporary contraction of the opening of the chimney, and found that it was not its being too large that caused the smoke to

issue. I went out and looked up at the top of the chimney: its funnel was joined in the same stack with others, some of them shorter, that drew very well, and I saw nothing to prevent its doing the same. In fine, after every other examination I could think of, I was obliged to own the insufficiency of my skill. But my friend, who made no pretensions to such kind of knowledge, afterwards discovered the cause himself. He got to the top of the funnel by a ladder, and looking down, found it filled with twigs and straw cemented by earth, and lined with feathers. It seems the house, after being built, had stood empty some years before he occupied it; and he concluded that some large birds had taken advantage of its retired situation to make their nest there. The rubbish, considerable in quantity, being removed, and the funnel cleared, the chimney drew well and gave satisfaction.

In general, smoke is a very tractable thing, easily governed and directed when one knows the principles, and is well informed of the circumstances. You know I made it *descend* in my Pennsylvania stove. I formerly had a more simple construction, in which the same effect was produced, but visible to the eye (Plate, figure 7.) It was composed of two plates A B and C D, placed as in the figure. The lower plate A B rested with its edge in the angle made by the hearth with the back of the chimney. The upper plate was fixed to the breast, and lapped over the lower about six inches wide and the length of the plates (near two feet) between them. Every other passage of air into the funnel was well stopped. When therefore a fire was made at E, for the first time with charcoal, till the air in the funnel was a little heated through the plates, and then wood laid on, the smoke would rise to A, turn over the edge of that plate, descend to D, then turn under the edge of the upper plate, and go up the chimney. It was pretty to see, but of no great use. Placing therefore the under plate in a higher situation, I removed the upper plate C D, and placed it perpendicularly (Plate, figure 8) so that the upper edge of the lower plate A B came within about three inches of it, and might be pushed farther from it, or suffered to come nearer to it, by a moveable wedge between them. The flame then ascending from the fire at E, was carried to strike the upper plate, made it very hot, and its heat rose and spread with the rarefied air into the room.

I believe you have seen in use with me, the contrivance of a sliding-plate over the fire, seemingly placed to oppose the rising of the smoke, leaving but a small passage for it, between the edge of the plate and the back of the chimney. It is particularly described, and its uses explained, in my former printed letter, and I mention it here only as another instance of the tractability of smoke.*

What is called the Staffordshire chimney (See the Plate, facing page 396) affords an example of the same kind. The opening of the chimney is bricked up, even with the fore-edge of its jambs, leaving open only a passage over the grate of the same width, and perhaps eight inches high. The grate consists of semicircular bars, their upper bar of the greatest diameter, the others under it smaller and smaller, so that it has the appearance of half a round basket. It is, with the coals it contains, wholly without the wall that shuts up the chimney, yet the smoke bends and enters the passage above it, the draft being strong, because no air can enter that is not obliged to pass near or through the fire, so that all that the funnel is filled with is much heated, and of course much rarefied.

Much more of the prosperity of a winter country depends on the plenty and cheapness of fuel, than is generally imagined. In travelling I have observed, that in those parts where the inhabitants can have neither wood, nor coal, nor turf, but at excessive prices, the working people live in miserable hovels, are ragged, and have nothing comfortable about them. But when fuel is cheap (or where they have the art of managing it to advantage) they are well furnished with necessaries, and have decent habitations. The obvious reason is, that the working hours of such people are the profitable hours, and they who cannot afford sufficient fuel have fewer such hours in the twenty-four, than those who have it cheap and plenty: for much of the domestic work of poor women, such as spinning, sewing, knitting; and of the men in those manufactures that require little bodily exercise, cannot well be performed where the fingers are numbed with cold; those people therefore, in cold weather, are induced to go to bed sooner, and lie longer in a morning than they would do if they could have good fires or warm stoves to sit by; and their hours of work are not sufficient to produce the means of comfortable subsistence. Those public works, therefore, such as roads, canals, &c. by which fuel may be brought cheap into such countries from distant places, are of great utility; and those who promote them may be reckoned among the benefactors of mankind.

I have great pleasure in having thus complied with your request, and in the reflection, that the friendship you honour me with, and in which I have ever been so happy, has continued so many years without the smallest interruption. Our distance from each other is now augmented, and nature must soon put an end to the possibility of my continuing our

* See Notes at the end of this paper, No. II.

correspondence: but if consciousness and memory remain in a future state, my esteem and respect for you, my dear friend, will be everlasting. B. FRANKLIN.

Notes for the Letter upon Chimneys.

No. I.

THE latest work on architecture that I have seen, is that entitled *Nutshells*, which appears to be written by a very ingenious man, and contains a table of the proportions of the openings of chimneys; but they relate solely to the proportions he gives his rooms, without the smallest regard to the funnels. And he remarks, respecting these proportions, that they are similar to the harmonic divisions of a monochord.* He does not indeed lay much stress on this; but it shows that we like the appearance of principles; and where we have not true ones, we have some satisfaction in producing such as are imaginary.

No. II.

The description of the sliding plates here promised, and which hath been since brought into use under various names, with some immaterial changes, is contained in a former letter to James Bowdoin, Esq. as follows:

To James Bowdoin, Boston.

LONDON, December 2, 1758.

I HAVE executed here an easy simple contrivance, that I have long since had in speculation, for keeping rooms warmer in cold weather than they generally are, and with less fire. It is this: the opening of the chimney is contracted, by brick-work faced with marble slabs, to about two feet between the jambs, and the breast brought down to within about three feet of the hearth. An iron frame is placed just under the breasts, and extending quite to the back of the chimney, so that a plate of the same metal may slide horizontally backwards and forwards in the grooves on each side of the frame. This plate is just so large as to fill the whole space, and shut the chimney entirely when thrust quite in, which is convenient when there is no fire. Drawing it out, so as to leave a space between its further edge and the back, of about two inches; this space is sufficient for the smoke to pass; and so large a part of the funnel being stopt by the rest of the plate, the passage of warm air out of the room, up the chimney, is obstructed and retarded, and by that means much cold air is prevented from coming in through crevices, to supply its place. This effect is made manifest three ways. First, when the fire burns briskly in cold weather, the howling or whistling noise made by the wind, as it enters the room through the crevices, when the chimney is open as usual, ceases as soon as the plate is slid in to its proper distance. Secondly, opening the door of the room about half an inch, and holding your hand against the opening, near the top of the door, you feel the cold air coming in against your hand, but weakly, if the plate be in. Let another person suddenly draw it out, so as to let the air of the room go up the chimney, with its usual freedom where chimneys are open, and you immediately feel the cold air rushing in strongly. Thirdly, if something be set against the door, just sufficient, when the plate is in, to keep the door nearly shut, by resisting the pressure of the air that would force it open; then, when the plate is drawn out, the door will be forced open by the increased pressure of the outward cold air endeavouring to get in to supply the place of the warm air, that now passes out of the room to go up the chimney. In our common open chimneys, half the fuel is wasted, and its effect lost; the air it has warmed being immediately drawn off. Several of my acquaintance, having seen this simple machine in my room, have imitated it at their own houses, and it seems likely to become pretty common. I describe it thus particularly to you, because I think it would be useful in Boston, where firing is often dear.

Mentioning chimneys puts me in mind of a property I formerly had occasion to observe in them, which I have not found taken notice of by others; it is, that in the summer time, when no fire is made in the chimneys, there is, nevertheless, a regular draft of air through them, continually passing upwards, from about five or six o'clock in the afternoon, till eight or nine o'clock the next morning, when the current begins to slacken and hesitate a little, for about half an hour, and then sets as strongly down again, which it continues to do till towards five in the afternoon, then slackens and hesitates as before, going sometimes a little up, then a little down, till, in about half an hour, it gets into a steady upward current for the night, which continues till eight or nine the next day; the hours varying a little as the days lengthen and shorten, and sometimes varying from sudden changes in the weather; as if, after being long warm, it should begin to grow cool about noon, while the air was coming down the chimney, the current will then change earlier than the usual hour, &c.

This property in chimneys I imagine we might turn to some account, and render improper, for the future, the old saying, *as useless as a chimney in summer*. If the opening of the chimney, from the breast down to the hearth, be closed by a slight moveable frame

* Upon comparing these proportions with those arising from the common divisions of the monochord, it happens that the first answers to unisons, and although the second is a discord, the third answers to the third minor, the fourth to the third major, the fifth to the fourth, the sixth to the fifth, and the seventh to the octave."—NUTSHELLS, page 85.

or two, in the manner of doors, covered with canvass, that will let the air through, but keep out the flies; and another little frame set within upon the hearth, with hooks on which to hang joints of meat, fowls, &c. wrapt well in wet linen cloths, three or four fold, I am confident, that if the linen is kept wet, by sprinkling it once a day, the meat would be so cooled by the evaporation, carried on continually by means of the passing air, that it would keep a week or more in the hottest weather. Butter and milk might likewise be kept cool, in vessels or bottles covered with wet cloths. A shallow tray, or keeler, should be under the frame to receive any water that might drip from the wetted cloths. I think, too, that this property of chimneys might, by means of smoke-jack vanes, be applied to some mechanical purposes, where a small but pretty constant power only is wanted.

If you would have my opinion of the cause of this changing current of air in chimneys, it is, in short, as follows. In summer time there is generally a great difference in the warmth of the air at mid-day and mid-night, and, of course, a difference of specific gravity in the air, as the more it is warmed the more it is rarefied. The funnel of a chimney, being for the most part surrounded by the house, is protected, in a great measure, from the direct action of the sun's rays, and also from the coldness of the night air. It thence preserves a middle temperature between the heat of the day and the coldness of the night. This middle temperature it communicates to the air contained in it. If the state of the outward air be cooler than that in the funnel of the chimney, it will, by being heavier, force it to rise, and go out at the top. What supplies its place from below, being warmed, in its turn, by the warmer funnel, is likewise forced up by the colder and weightier air below, and so the current is continued till the next day, when the sun gradually changes the state of the outward air, makes it first as warm as the funnel of the chimney can make it (when the current begins to hesitate) and afterwards warmer. The funnel, being cooler than the air that comes into it, cools that air, makes it heavier than the outward air, of course it descends; and what succeeds it from above being cooled in its turn, the descending current continues till towards evening, when it again hesitates and changes its course, from the change of warmth in the outward air, and the nearly remaining same middle temperature in the funnel.

Upon this principle, if a house were built behind Beacon-hill, an adit carried from one of the doors into the hill horizontally, till it meet with a perpendicular shaft sunk from its top, it seems probable to me, that those who lived in the house would constantly, in the heat even of the calmest day, have as much cool air passing through the house, as they should choose; and the same, though reversed in its current, during the stillest night.

I think, too, this property might be made of use to miners; as, where several shafts or pits are sunk perpendicularly into the earth, communicating at bottom by horizontal passages, which is a common case, if a chimney of thirty or forty feet high were built over one of the shafts, or so near the shaft, that the chimney might communicate with the top of the shaft, all air being excluded but what should pass up or down by the shaft, a constant change of air would, by this means, be produced in the passages below, tending to secure the workmen from those damps which so frequently incommode them. For the fresh air would be almost always going down the open shaft, to go up the chimney, or down the chimney, to go up the shaft. Let me add one observation more, which is, that if that part of the funnel of a chimney, which appears above the roof of a house, be pretty long, and have three of its sides exposed to the heat of the sun successively, viz. when he is in the east, in the south, and in the west, while the north side is sheltered by the building from the cool northerly winds; such a chimney will often be so heated by the sun, as to continue the draft strongly upward, through the whole twenty-four hours, and often for many days together. If the outside of such a chimney be painted black, the effect will be still greater and the current stronger.

No. III.

It is said the northern Chinese have a method of warming their ground floors, which is ingenious. Those floors are made of tiles, a foot square and two inches thick, their corners being supported by bricks set on end, that are a foot long and four inches square; the tiles, too, join into each other, by ridges and hollows along their sides. This forms a hollow under the whole floor, which on one side of the house has an opening into the air, where a fire is made, and it has a funnel rising from the other side to carry off the smoke. The fuel is a sulphurous pitcoal, the smell of which in the room is thus avoided, while the floor, and of course the room, is well warmed. But as the underside of the floor must grow foul with soot, and a thick coat of soot prevents much of the direct application of the hot air to the tiles, I conceive that burning the smoke, by obliging it to descend through red coals, would in this construction be very advantageous, as more heat would be given by the flame than by the smoke, and the floor being thereby kept free from soot would be more heated with less fire. For this purpose I would propose erecting the funnel close to the grate, so as to have only an iron plate between the fire and the funnel, through which

plate, the air in the funnel being heated, it will be sure to draw well, and force the smoke to descend, as in the figure (Plate, figure 9.) where A is the funnel or chimney, B the grate on which the fire is placed, C one of the apertures through which the descending smoke is drawn into the channel D of figure 10, along which channel it is conveyed by a circuitous route, as designated by the arrows, until it arrives at the small aperture E, figure 10, through which it enters the funnel F. G in both figures is the iron plate against which the fire is made, which being heated thereby, will rarefy the air in that part of the funnel, and cause the smoke to ascend rapidly. The flame thus dividing from the grate to the right and left, and turning in passages, disposed, as in figure 13, so as that every part of the floor may be visited by it before it enters the funnel F, by the two passages E E, very little of the heat will be lost, and a winter room thus rendered very comfortable.

No. IV.

Page 404. *Few can imagine*, &c. It is said the Icelanders have very little fuel, chiefly drift wood that comes upon their coast. To receive more advantage from its heat, they make their doors low, and have a stage round the room above the door, like a gallery, wherein the women can sit and work, the men read or write, &c. The roof being tight, the warm air is confined by it and kept from rising higher and escaping; and the cold air, which enters the house when the door is opened, cannot rise above the level of the top of the door, because it is heavier than the warm air above the door, and so those in the gallery are not incommoded by it. Some of our too lofty rooms might have a stage so constructed as to make a temporay gallery above, for the winter, to be taken away in summer. Sedentary people would find much comfort there in cold weather.

No. V.

Page 410. *Where they have the art of managing it*, &c. In some houses of the lower people, among the northern nations of Europe, and among the poorer sort of Germans in Pennsylvania, I have observed this construction, which appears very advantageous. (Plate, figure 11.) A is the kitchen with its chimney; B an iron stove in the stove-room. In a corner of the chimney is a hole through the back into the stove, to put in fuel, and another hole above it to let the smoke of the stove come back into the chimney. As soon as the cooking is over, the brands in the kitchen chimney are put through the hole to supply the stove, so that there is seldom more than one fire burning at a time. In the floor over the stove-room, is a small trap-door, to let the warm air rise occasionally into the chamber. Thus the whole house is warmed at little expense of wood, and the stove-room kept constantly warm; so that in the coldest winter nights, they can work late, and find the room still comfortable when they rise to work early. An English farmer in America, who makes great fires in large open chimneys, needs the constant employment of one man to cut and haul wood for supplying them; and the draft of cold air to them is so strong, that the heels of his family are frozen while they are scorching their faces, and the room is never warm, so that little sedentary work can be done by them in winter. The difference in this article alone of economy shall, in a course of years, enable the German to buy out the Englishman, and take possession of his plantation.

Miscellaneous Observations.

Chimneys, whose funnels go up in the north wall of a house, and are exposed to the north winds, are not so apt to draw well as those in a south wall; because, when rendered cold by those winds, they draw downwards.

Chimneys, enclosed in the body of a house, are better than those whose funnels are exposed in cold walls.

Chimneys in stacks are apt to draw better than separate funnels, because the funnels, that have constant fires in them warm the others, in some degree, that have none.

One of the funnels, in a house I once occupied, had a particular funnel joined to the south side of the stack, so that three of its sides were exposed to the sun in the course of the day, viz. (Plate, figure 12.) the east side E during the morning, the south side S in the middle part of the day, and the west side W during the afternoon, while its north side was sheltered by the stack from the cold winds. This funnel which came from the ground-floor, and had a considerable height above the roof, was constantly in a strong drawing state day and night, winter and summer.

Blacking of funnels, exposed to the sun, would probably make them draw still stronger.

In Paris I saw a fire-place so ingeniously contrived as to serve conveniently two rooms, a bedchamber and a study. The funnel over the fire was round. The fire-place was of cast iron (Plate, figure 13.) having an upright back A, and two horizontal semicircular plates B C, the whole so ordered as to turn on the pivots D E. The plate B always stopped that part of the round funnel that was next to the room without fire, while the other half of the funnel over the fire was always open. By this means a servant in the morning could make a fire on the hearth C, then in the study, without disturbing the master by going into his chamber; and the master, when he rose, could, with a touch of his foot, turn the chimney on its pivots, and bring the fire into his chamber, keep it there as long as he want-

ed it, and turn it again, when he went out into his study. The room which had no fire in it was also warmed by the heat coming through the back plate, and spreading in the room, as it could not go up the chimney.

Description of a new Stove for burning of Pitcoal, and consuming all its Smoke.—Read in the American Philosophical Society, January 28, 1786.

Towards the end of the last century an ingenious French philosopher, whose name I am sorry I cannot recollect, exhibited an experiment to show, that very offensive things might be burnt in the middle of a chamber such as woollen rags, feathers, &c. without creating the least smoke or smell. The machine in which it was made, if I remember right, was of this form (see Plate, figure 1.) made of plate iron. Some clear burning charcoals were put into the opening of the short tube A, and supported there by the grate B. The air, as soon as the tubes grew warm, would ascend in the longer leg C and go out at D, consequently air must enter at A descending to B. In this course it must be heated by the burning coals through which it passed, and rise more forcibly in the longer tube, in proportion to its degree of heat or rarefaction, and length of that tube. For such a machine is a kind of inverted syphon; and as the greater weight of water in the longer leg of a common syphon in descending is accompanied by an ascent of the same fluid in the shorter; so, in this inverted syphon, the greater quantity of levity of air in the longer leg, in rising, is accompanied by the descent of air in the shorter. The things to be burned being laid on the hot coals at A, the smoke must descend through those coals, be converted into flame, which, after destroying the offensive smell, came out at the end of the longer tube as mere heated air.

Whoever would repeat this experiment with success must take care that the part A, B, of the short tube, be quite full of burning coals, so that no part of the smoke may descend and pass by them without going through them, and being converted into flame; and that the longer tube be so heated as that the current of ascending hot air is established in it before the things to be burnt are laid on the coals; otherwise there will be a disappointment.

It does not appear either in the Memoirs of the Academy of Sciences, or Philosophical Transactions of the English Royal Society, that any improvement was ever made of this ingenious experiment, by applying it to useful purposes. But there is a German book, entitled *Vulcanus Famulans*, by John George Leutmann, P. D. printed at Wirtemberg in 1723, which describes, among a great variety of other stoves for warming rooms one, which seems to have been formed on the same principle, and probably from the hint thereby given, though the French experiment is not mentioned. This book being scarce, I have translated the chapter describing the stove, viz.

"*Vulcanus Famulans, by John George Leutmann, P. D. Wirtemberg*, 1723.

"CHAP. VII.

"*On a Stove, which draws downwards.*

"Here follows the description of a sort of stove, which can easily be removed and again replaced at pleasure. This drives the fire down under itself, and gives no smoke, but however a very unwholesome vapour.

"In the figure, A is an iron vessel like a funnel, (Plate, figure 20.) in diameter at the top about twelve inches, at the bottom near the grate about five inches; its height twelve inches. This is set on the barrel C, which is ten inches diameter and two feet long, closed at each end E E. From one end rises a pipe or flue about four inches diameter, on which other pieces of pipe are set, which are gradually contracted to D, where the opening is but about two inches. Those pipes must together be at least four feet high. B is an iron grate. F F are iron handles guarded with wood, by which the stove is to be lifted and moved. It stands on three legs. Care must be taken to stop well all the joints, that no smoke may leak through.

"When this stove is to be used, it must first be carried into the kitchen and placed in the chimney near the fire. There burning wood must be laid and left upon its grate till the barrel C is warm, and the smoke no longer rises at A, but descends towards C. Then it is to be carried into the room which it is to warm. When once the barrel C is warm, fresh wood may be thrown into the vessel A as often as one pleases, the flame descends and without smoke, which is so consumed that only a vapour passes out at D.

"As this vapour is unwholesome, and affects the head, one may be freed from it, by fixing in the wall of the room an inverted funnel, such as people use to hang over lamps, through which their smoke goes out as through a chimney. This funnel carries out all the vapour cleverly, so that one finds no inconvenience from it, even though the opening D be placed a span below the mouth of the said funnel G. The neck of the funnel is better when made gradually bending, than if turned in a right angle.

"The cause of the draft downwards in the stove is the pressure of the outward air, which, falling into the vessel A in a column of twelve inches diameter, finds only a resisting passage at the grate B, of five inches, and one at D, of two inches, which are much too weak to drive it back again; besides, A stands

much higher than B, and so the pressure on it is greater and more forcible, and beats down the frame to that part where it finds the least resistance. Carrying the machine first to the kitchen fire for preparation, is on this account, that in the beginning the fire and smoke naturally ascend, till the air in the close barrel C is made thinner by the warmth. When that vessel is heated, the air in it is rarefied, and then all the smoke and fire descends under it.

"The wood should be thoroughly dry, and cut into pieces five or six inches long, to fit it for being thrown into the funnel A." Thus far the German book.

It appears to me, by Mr. Leutmann's explanation of the operation of this machine, that he did not understand the principles of it, whence I conclude he was not the inventor of it; and by the description of it, wherein the opening at A is made so large, and the pipe E, D, so short, I am persuaded he never made nor saw the experiment, for the first ought to be much smaller and the last much higher, or it hardly will succeed. The carrying it in the kitchen, too, every time the fire should happen to be out, must be so troublesome, that it is not likely ever to have been in practice, and probably has never been shown but as a philosophical experiment. The funnel for conveying the vapour out of the room would besides have been uncertain in its operation, as a wind blowing against its mouth would drive the vapour back.

The stove I am about to describe was also formed on the idea given by the French experiment, and completely carried into execution before I had any knowledge of the German invention; which I wonder should remain so many years in a country, where men are so ingenious in the management of fire, without receiving long since the improvements I have given it.

Description of the Parts.

A, the bottom plate which lies flat upon the hearth, with its partitions, 1, 2, 3, 4, 5, 6, (Plate, figure 2.) that are cast with it, and a groove Z Z, in which are to slide, the bottom edges of the small plates Y, Y, figure 12; which plates meeting at X close the front.

B 1, figure 3, is the cover plate showing its under side, with the grooves 1, 2, 3, 4, 5, 6, to receive the top edges of the partitions that are fixed to the bottom plate. It shows also the grate W W, the bars of which are cast in the plate, and a groove V V, which comes right over the groove Z Z, figure 2, receiving the upper edges of the small sliding plates Y Y, figure 12.

B 2, figure 4, shows the upper side of the same plate, with a square impression or groove for receiving the bottom mouldings T T T T of the three-sided box C, figure 5, which is cast in one piece.

D, figure 6, its cover, showing its under side with grooves to receive the upper edges S S S of the sides of C, figure 5, also a groove R, R, which when the cover is put on comes right over another Q Q in C, figure 5, between which it is to slide.

E, figure 7, the front plate of the box.

P, a hole three inches diameter through the cover D, figure 6, over which hole stands the vase F, figure 8, which has a corresponding hole two inches diameter through its bottom.

The top of the vase opens at O, O, O, figure 8, and turns back upon a hinge behind when coals are to be put in; the vase has a grate within at N N of cast iron H, figure 9, and a hole in the top, one and a half inches diameter, to admit air, and to receive the ornamental brass gilt flame M, figure 10, which stands in that hole, and, being itself hollow and open, suffers air to pass through it into the fire.

G, figure 11, is a drawer of plate iron, that slips in between the partitions 2 and 3, figure 2, to receive the falling ashes. It is concealed when the small sliding plates Y Y, figure 12, are shut together.

I, I, I, I, figure 8, is a niche built of brick in the chimney and plastered. It closes the chimney over the vase, but leaves two funnels, one in each corner, communicating with the bottom box K K, figure 2.

Dimensions of the Parts.

	Feet	In.
Front of the bottom box,	2	0
Height of its partitions,	0	4½
Length of No. 1, 2, 3, and 4, each,	1	3
Length of No. 5 and 6, each,	0	8½
Breadth of the passage between No. 2 and 3,	0	6
Breadth of the other passages each,	0	3½
Breadth of the grate,	0	6½
Length of ditto,	0	8
Bottom moulding of box, C, square,	1	0
Height of the sides of ditto,	0	4
Length of the back side,	0	10
Length of the right and left sides, each,	0	9½
Length of the front plate E, where longest,	0	11
The cover D, square,	1	0
Hole in ditto, diameter,	0	3
Sliding plates Y Y, their length, each,	1	0
..... their breadth, each,	0	4½
Drawer G, its length,	0	1
..... breadth,	0	5½
..... depth,	0	4
..... depth of its further end only,	0	1
Grate H in the vase, its diameter to the extremity of its knobs,	0	5
Thickness of the bars at top,	0	0½
..... at bottom less,	0	0¼
Depth of the bars at the top,	0	0¼
Height of the vase,	1	6
Diameter of the opening O, O, in the clear,	0	8
Diameter of the air-hole at top,	0	1½
..... of the flame hole at bottom,	0	2

To fix this machine.

Spread mortar on the hearth to bed the bottom plate A, then lay that plate level, equally distant from each jamb, and project-

ing out as far as you think proper. Then putting some Windsor loam in the grooves of the cover B, lay that on: trying the sliding plates Y Y, to see if they move freely in the grooves Z Z, V V, designed for them.

Then begin to build the niche, observing to leave the square corners of the chimney unfilled; for they are to be funnels. And observe also to leave a free open communication between the passages at K K, and the bottom of those funnels, and mind to close the chimney above the top of the niche, that no air may pass up that way. The concave back of the niche will rest on the circular iron partition 1 A 4, figure 2, then with a little loam put on the box C over the grate, the open side of the box in front.

Then, with loam in three of its grooves, the grooves R R being left clean, and brought directly over the groove Q Q in the box, put on the cover D, trying the front plate E, to see if it slides freely in those grooves.

Lastly, set on the vase, which has small holes in the moulding of its bottom to receive two iron pins that rise out of the plate D at I I, for the better keeping it steady.

Then putting in the grate H, which rests on its three knobs h h h against the inside of the vase, and slipping the drawer into its place; the machine is fit for use.

To use it.

Let the first fire be made after eight in the evening or before eight in the morning, for at those times and between those hours all night, there is usually a draft up a chimney, though it has long been without fire; but between those hours in the day there is often, in a cold chimney, a draft downwards, when, if you attempt to kindle a fire, the smoke will come into the room.

But to be certain of your proper time, hold a flame over the air-hole at the top. If the flame is drawn strongly down for a continuance, without whiffling, you may begin to kindle a fire.

First put in a few charcoals on the grate H.

Lay some small sticks on the charcoals.

Lay some pieces of paper on the sticks.

Kindle the paper with a candle.

Then shut down the top, and the air will pass down through the air-hole, blow the flame of the paper down through the sticks, kindle them, and their flame passing lower kindles the charcoal.

When the charcoal is well kindled, lay on it the seacoals, observing not to choak the fire by putting on too much at first.

The flame descending through the hole in the bottom of the vase, and that in plate D into the box C, passes down farther through the grate W W in plate B 1, then passes horizontally towards the back of the chimney; there dividing, and turning to the right and left, one part of it passes round the far end of the partition 2, then coming forward it turns round the near end of partition 1, then moving backward it arrives at the opening into the bottom of one of the upright corner funnels behind the niche, through which it ascends into the chimney, thus heating that half of the box and that side of the niche. The other part of the divided flame passes round the far end of partition 3, round the near end of partition 4, and so into and up the other corner funnel, thus heating the other half of the box, and the other side of the niche. The vase itself, and the box C will also be very hot, and the air surrounding them being heated, and rising as it cannot get into the chimney, it spreads into the room, colder air succeeding is warmed in its turn, rises and spreads, till by the continual circulation the whole is warmed.

If you should have occasion to make your first fire at hours not so convenient as those above mentioned, and when the chimney does not draw, do not begin it in the vase, but in one or more of the passages of the lower plate, first covering the mouth of the vase. After the chimney has drawn a while with the fire thus low, and begins to be a little warm, you may close those passages and kindle another fire in the box C, leaving its sliding shutter a little open; and when you find after some time that the chimney being warmed draws forcibly, you may shut that passage, open your vase, and kindle your fire there, as above directed. The chimney well warmed by the first day's fire will continue to draw constantly all winter, if fires are made daily.

You will, in the management of your fire, have need of the following implements:

A pair of small light tongs, twelve or fifteen inches long, plate, figure 13.

A light poker about the same length with a flat broad point, figure 14.

A rake to draw ashes out of the passages of the lower plate, where the lighter kind escaping the ash-box will gather by degrees, and perhaps once more in a week or ten days require being removed, figure 15.

And a fork with its prongs wide enough to slip on the neck of the vase cover, in order to raise and open it when hot, to put in fresh coals figure 16.

In the management of this stove there are certain precautions to be observed, at first with attention, till they become habitual. To avoid the inconvenience of smoke, see that the grate H be clear before you begin to light a fresh fire. If you find it clogged with cinders and ashes, turn it up with your tongs and let them fall upon the grate below; the ashes will go through it, and the cinders may be raked off and returned into the vase when you would burn them. Then see that all the sliding plates are in their places and close shut, that no air may enter the stove but

through the round opening at the top of the vase. And to avoid the inconvenience of dust from the ashes, let the ash drawer be taken out of the room to be emptied: and when you rake the passages, do it when the draft of the air is strong inwards, and put the ashes carefully into the ash-box, that remaining in its place.

If, being about to go abroad, you would prevent your fire burning in your absence, you may do it by taking the brass flame from the top of the vase, and covering the passage with a round tin plate, which will prevent the entry of more air than barely sufficient to keep a few of the coals alive. When you return, though some hours absent, by taking off the tin plate and admitting the air, your fire will soon be recovered.

The effect of this machine, well managed, is to burn not only the coals, but all the smoke of the coals, so that while the fire is burning, if you go out and observe the top of your chimney, you will see no smoke issuing, nor any thing but clear warm air, which as usual makes the bodies seen through it appear waving.

But let none imagine from this, that it may be a cure for bad or smoky chimneys, much less, that as it burns the smoke it may be used in a room that has no chimney. It is by the help of a good chimney, the higher, the better, that it produces its effect; and though a flue of plate iron sufficiently high might be raised in a very lofty room, the management to prevent all disagreeable vapour would be too nice for common practice, and small errors would have unpleasing consequences.

It is certain that clean iron yields no offensive smell when heated. Whatever of that kind you perceive where there are iron stoves, proceeds therefore from some foulness burning or fuming on their surface. They should therefore never be spit upon, or greased, nor should any dust be suffered to lie upon them. But as the greatest care will not always prevent these things, it is well once a week to wash the stove with soap lees and a brush, rinsing it with clean water.

The Advantages of this Stove.

1. The chimney does not grow foul, nor ever need sweeping; for as no smoke enters it, no soot can form in it.

2. The air heated over common fires instantly quits the room and goes up the chimney with the smoke; but in the stove, it is obliged to descend in flame and pass through the long winding horizontal passages, communicating its heat to a body of iron plate, which, having thus time to receive the heat, communicates the same to the air of the room, and thereby warms it to a greater degree.

3. The whole of the fuel is consumed by being turned into flame, and you have the benefit of its heat, whereas in common chimneys a great part goes away in smoke which you see as it rises, but it affords you no rays of warmth. One may obtain some notion of the quantity of fuel thus wasted in smoke, by reflecting on the quantity of soot that a few weeks firing will lodge against the sides of the chimney, and yet this is formed only of those particles of the column of smoke that happen to touch the sides in its ascent. How much more must have passed off in the air? And we know that this soot is still fuel: for it will burn and flame as such, and when hard caked together is indeed very like and almost as solid as the coal it proceeds from. The destruction of your fuel goes on nearly in the same quantity whether in smoke or in flame: but there is no comparison in the difference of heat given. Observe when fresh coals are first put on your fire, what a body of smoke arises. This smoke is for a long time too cold to take flame. If you then plunge a burning candle into it, the candle instead of inflaming the smoke will instantly be itself extinguished. Smoke must have a certain degree of heat to be inflammable. As soon as it has acquired that degree, the approach of a candle will inflame the whole body, and you will be very sensible of the difference of the heat it gives. A still easier experiment may be made with the candle itself. Hold your hand near the side of its flame, and observe the heat it gives; then blow it out, the hand remaining in the same place, and observe what heat may be given by the smoke that rises from the still burning snuff. You will find it very little. And yet that smoke has in it the substance of so much flame, and will instantly produce it, if you hold another candle above it so as to kindle it. Now the smoke from the fresh coals laid on this stove, instead of ascending and leaving the fire while too cold to burn, being obliged to descend through the burning coals, receives among them that degree of heat which converts it into flame, and the heat of that flame is communicated to the air of the room, as above explained.

4. The flame from the fresh coals laid on in this stove, descending through the coals already ignited, preserves them long from consuming, and continues them in the state of red coals as long as the flame continues that surrounds them, by which means the fires made in this stove are of much longer duration than in any other, and fewer coals are therefore necessary for a day. This is a very material advantage indeed. That flame should be a kind of pickle, to preserve burning coals from consuming, may seem a paradox to many, and very unlikely to be true, as it appeared to me the first time I observed the fact. I must therefore relate the circumstances, and shall mention an easy experiment, by which my reader may be in possession of every thing

necessary to the understanding of it. In the first trial I made of this kind of stove, which was constructed of thin plate iron, I had instead of the vase a kind of inverted pyramid like a mill-hopper; and fearing at first that the small grate contained in it might be clogged by cinders, and the passage of the flame sometimes obstructed, I ordered a little door near the grate, by means of which I might on occasion clear it: though after the stove was made, and before I tried it, I began to think this precaution superfluous, from an imagination, that the flame being contracted in the narrow part where the grate was placed, would be more powerful in consuming what it should there meet with, and that any cinders between or near the bars would be presently destroyed and the passage opened. After the stove was fixed and in action, I had a pleasure now and then in opening that door a little, to see through the crevice how the flame descended among the red coals, and observing once a single coal lodged on the bars in the middle of the focus, a fancy took me to observe with my watch in how short a time it would be consumed. I looked at it long without perceiving it to be at all diminished, which surprised me greatly. At length it occurred to me, that I and many others had seen the same thing thousands of times, in the conservation of the red coal formed in the snuff of a burning candle, which while enveloped in flame, and thereby prevented from the contact of passing air, is long continued, and augments instead of diminishing, so that we are often obliged to remove it by the snuffers, or bend it out of the flame into the air, where it consumes presently to ashes. I then supposed, that to consume a body by fire, passing air was necessary to receive and carry off the separated particles of the body: and that the air passing in the flame of my stove, and in the flame of a candle, being already saturated with such particles, could not receive more, and therefore left the coal undiminished as long as the outward air was prevented from coming to it by the surrounding flame, which kept it in a situation somewhat like that of charcoal in a well luted crucible, which, though long kept in a strong fire, comes out unconsumed.

An easy experiment will satisfy any one of this conserving power of flame enveloping red coal. Take a small stick of deal or other wood the size of a goose-quill, and hold it horizontally and steadily in the flame of the candle above the wick, without touching it, but in the body of the flame. The wood will first be inflamed, and burn beyond the edge of the flame of the candle, perhaps a quarter of an inch. When the flame of the wood goes out, it will leave a red coal at the end of the stick, part of which will be in the flame of the candle, and part out in the air. In a minute or two you will perceive the coal in the air diminish gradually, so as to form a neck; while the part in the flame continues of its first size, and at the neck being quite consumed it drops off: and by rolling it between your fingers when extinguished you will find it still a solid coal.

However, as one cannot be always putting on fresh fuel in this stove to furnish a continual flame as is done in a candle, the air in the intervals of time gets at the red coals and consumes them. Yet the conservation while it lasted, so much delayed the consumption of the coals, that two fires, one made in the morning, and the other in the afternoon, each made by only a hatful of coals, were sufficient to keep my writing room about sixteen feet square and ten high, warm a whole day. The fire kindled at seven in the morning would burn till noon; and all the iron of the machine with the walls of the niche being thereby heated, the room kept warm till evening, when another smaller fire kindled, kept it warm till midnight.

Instead of the sliding plate E, which shuts the front of the box C, I sometimes used another which had a pane of glass, or, which is better, of Muscovy talc, that the flame might be seen descending from the bottom of the vase and passing in a column through the box C, into the cavities of the bottom plate, like water falling from a funnel, admirable to such as are not acquainted with the nature of the machine, and in itself a pleasing spectacle.

Every utensil, however properly contrived to serve its purpose, requires some practice before it can be used adroitly. Put into the hands of a man for the first time a gimblet or a hammer (very simple instruments) and tell him the use of them, he shall neither bore a hole nor drive a nail with the dexterity and success of another who has been accustomed to handle them. The beginner therefore in the use of this machine, will do well not to be discouraged with little accidents that may arise at first from his want of experience. Being somewhat complex, it requires, as already said, a variety of attentions; habit will render them unnecessary. And the studious man who is much in his chamber, and has a pleasure in managing his own fire, will soon find this a machine most comfortable and delightful. To others who leave their fires to the care of ignorant servants, I do not recommend it. They will with difficulty acquire the knowledge necessary, and will make frequent blunders that will fill your room with smoke. It is therefore by no means fit for common use in families. It may be advisable to begin with the flaming kind of stone coal, which is large, and, not caking together, is not so apt to clog the grate. After some experience, any kind of coal may be used, and with this advantage, that no smell, even from

the most sulphurous kind can come into your room, the current of air being constantly into the vase, where too that smell is all consumed.

The vase form was chosen as being elegant in itself, and very proper for burning of coals: where wood is the usual fuel, and must be burned in pieces of some length, a long square chest may be substituted, in which A is the cover opening by a hinge behind, B the grate, C the hearth-box with its divisions as in the other, D the plan of the chest, E the long narrow grate. (Plate, figure 17.) This I have not tried, but the vase machine was completed in 1771, and used by me in London three winters, and one afterwards in America, much to my satisfaction; and I have not yet thought of any improvement it may be capable of, though such may occur to others. For common use, while in France, I have contrived another grate for coals, which has in part the same property of burning the smoke and preserving the red coals longer by the flame, though not so completely as in the vase, yet sufficiently to be very useful, which I shall now describe as follows.

A, is a round grate, one foot (French) in diameter, and eight inches deep between the bars and the back; (Plate, figure 18.) the sides and back of the plate iron; the sides having holes of half an inch diameter distant three or four inches from each other, to let in air for enlivening the fire. The back without holes. The sides do not meet at top nor at bottom by eight inches: that square is filled by grates of small bars crossing front to back to let in air below, and let out the smoke or flame above. The three middle bars of the front grate are fixed, the upper and lower may be taken out and put in at pleasure, when hot, with a pair of pincers. This round grate turns upon an axis, supported by the crochet B, the stem of which is an inverted conical tube five inches deep, which comes on as many inches upon a pin that fits it, and which is fixed upright in a cast iron plate D, that lies upon the hearth: in the middle of the top and bottom grates are fixed small upright pieces E E about an inch high, which, as the whole is turned on its axis, stop it when the grate is perpendicular. Figure 19 is another view of the same machine.

In making the first fire in a morning with this grate, there is nothing particular to be observed. It is made as in other grates, the coals being put in above, after taking out the upper bar, and replacing it when they are in. The round figure of the fire when thoroughly kindled is agreeable, it represents the great giver of warmth to our system. As it burns down and leaves a vacancy above, which you would fill with fresh coals, the upper bar is to be taken out, and afterwards replaced. The fresh coals, while the grate continues in the same position, will throw up as usual a body of thick smoke. But every one accustomed to coal fires in common grates must have observed, that pieces of fresh coal stuck in below among the red coals have their smoke so heated as that it becomes flame as fast as it is produced, which flame rises among the coals and enlivens the appearance of the fire. Here then is the use of this swivel grate. By a push with your tongs or poker, you turn it it on its pin till it faces the back of the chimney, then turn it over on its axis gently till it again faces the room, whereby all the fresh coals will be found under the live coals, and the greater part of the smoke arising from the fresh coals will in its passage through the live ones be heated so as to be converted into flame: whence you have much more heat from them, and your red coals are longer preserved from consuming. I conceive this construction, though not so complete a consumer of all the smoke as the vase, yet to be fitter for common use, and very advantageous. It gives too a full sight of the fire, always a pleasing object, which we have not in the other. It may with a touch be turned more or less from any one of the company that desires to have less of its heat, or presented full to one just come out of the cold. And supported in a horizontal position, a tea-kettle may be boiled on it.

The author's description of his Pennsylvania fire-place, first published in 1744, having fallen into the hands of workmen in Europe. who did not, it seems, well comprehend the principles of that machine, it was much disfigured in their imitations of it; and one of its main intentions, that of admitting a sufficient quantity of fresh air warmed in entering through the air-box, nearly defeated, by a pretended improvement, in lessening its passages to make more room for coals in a grate. On pretence of such improvements, they obtained patents for the invention, and for a while made great profits by the sale, till the public became sensible of that defect in the expected operation. If the same thing should be attempted with this vase stove, it will be well for the buyer to examine thoroughly such pretended improvements, lest, being the mere productions of ignorance, they diminish or defeat the advantages of the machine, and produce inconvenience and disappointment.

The method of burning smoke, by obliging it to descend through hot coals, may be of great use in heating the walls of a hot-house. In the common way, the horizontal passages or flues that are made to go and return in those walls, lose a great deal of their effect when they come to be foul with soot; for a thick blanket-like lining of soot prevents much of the hot air from touching and heating the brick work in its passage, so that more fire must be made as the flue grows fouler: but by burning the smoke they are kept always

clean. The same method may also be of great advantage to those businesses in which large coppers or caldrons are to be heated.

Written at Sea, 1785.

To Miss Stephenson.

Method of Contracting Chimneys. Modesty in Disputation.

CRAVEN-STREET, Saturday evening, past 10.

THE question you ask me is a very sensible one, and I shall be glad if I can give you a satisfactory answer. There are two ways of contracting a chimney; one by contracting the opening *before* the fire; the other, by contracting the funnel *above* the fire. If the funnel above the fire *is* left open in its full dimensions, and the opening before the fire is contracted; then the coals, I imagine, will burn faster, because more air is directed through the fire, and in a stronger stream; that air which before passed over it, and on each side of it, now passing *through* it. This is seen in narrow stove chimneys, when a *sacheverell* or blower is used, which still more contracts the narrow opening.—But if the funnel only *above* the fire is contracted, then, as a less stream of air is passing up the chimney, less must pass through the fire, and consequently it should seem that the consuming of the coals would rather be checked than augmented by such contraction. And this will also be the case, when both the opening *before* the fire, and the funnel *above* the fire are contracted, provided the funnel above the fire is more contracted in proportion than the opening before the fire.—So you see I think you had the best of the argument; and as you notwithstanding gave it up in complaisance to the company, I think you had also the best of the dispute. There are few, though convinced, that know how to give up, even an error they have been once engaged in maintaining; there is therefore the more merit in dropping a contest where one thinks one's self right; it is at least respectful to those we converse with. And indeed all our knowledge is so imperfect, and we are from a thousand causes so perpetually subject to mistake and error, that positiveness can scarce ever become even the most knowing; and modesty in advancing any opinion, however plain and true we may suppose it, is always decent, and generally more likely to procure assent. Pope's rule

> To speak, though sure, with seeming diffidence,

is therefore a good one; and if I had ever seen in your conversation the least deviation from it, I should earnestly recommend it to your observation.—I am, &c.

B. FRANKLIN.

POLITICAL ECONOMY.

ESSAYS.

On Population.

Concerning the Increase of Mankind, peopling of Countries, &c.—Written in Pennsylvania, 1751.

1. TABLES of the proportion of marriages to births, of deaths to births, of marriages to the number of inhabitants, &c. formed on observations made upon the bills of mortality, christenings, &c. of populous cities, will not suit countries; nor will tables, formed on observations made on full settled old countries, as Europe, suit new countries, as America.

2. For people increase in proportion to the number of marriages, and that is greater, in proportion to the ease and convenience of supporting a family. When families can be easily supported, more persons marry, and earlier in life.

3. In cities, where all trades, occupations, and offices, are full, many delay marrying, till they can see how to bear the charges of a family; which charges are greater in cities, as luxury is more common; many live single during life, and continue servants to families, journeymen to trade, &c. Hence cities do not, by natural generation, supply themselves with inhabitants; the deaths are more than the births.

4. In countries full settled, the case must be nearly the same, all lands being occupied and improved to the height; those who cannot get land, must labour for others that have it; when labourers are plenty, their wages will be low; by low wages a family is supported with difficulty; this difficulty deters many from marriage, who therefore long continue servants and single. Only as the cities take supplies of people from the country, and thereby make a little more room in the country, marriage is a little more encouraged there, and the births exceed the deaths.

5. Great part of Europe is fully settled with husbandmen, manufacturers, &c. and therefore cannot now much increase in people. America is chiefly occupied by Indians, who subsist mostly by hunting. But as the hunter, of all men, requires the greatest quantity of land from whence to draw his subsistence, (the husbandman subsisting on much less, the gardener on still less, and the manufacturer requiring least of all) the Europeans found America as fully settled, as it well could be by hunters; yet these, having large tracts, were easily prevailed on to part with portions of territory to the new-comers, who did not much interfere with the natives in hunting, and furnished them with many things they wanted.

6. Land being thus plenty in America, and so cheap, as that a labouring man, who understands husbandry, can, in a short time, save money enough to purchase a piece of new land, sufficient for a plantation, whereon he may subsist a family; such are not afraid to marry; for if they even look far enough forward to consider how their children, when grown up, are to be provided for, they see, that more land is to be had at rates equally easy, all circumstances considered.

7. Hence marriages in America are more general, and more generally early, than in Europe. And if it is reckoned here, that there is but one marriage *per annum* among one hundred persons, perhaps we may here reckon two; and if in Europe, they have but four births to a marriage, (many of their marriages being late,) we may here reckon eight, of which, if one half grow up, and our marriages are made, reckoning one with another, at twenty years of age, our people must at least be doubled every twenty years.

8. But notwithstanding this increase, so vast is the territory of North America, that it will require many ages to settle it fully, and till it is fully settled, labour will never be cheap here, where no man continues long a labourer for others, but gets a plantation of his own; no man continues long a journeyman to a trade, but goes among those new settlers, and sets up for himself, &c. Hence labour is no cheaper now, in Pennsylvania, than it was thirty years ago, though so many thousand labouring people have been imported from Germany and Ireland.

9. The danger, therefore, of these colonies

interfering with their mother country in trades, that depend on labour, manufactures, &c. is too remote to require the attention of Great Britain.

10. But, in proportion to the increase of the colonies, a vast demand is growing for British manufactures; a glorious market, wholly in the power of Britain, in which foreigners cannot interfere, which will increase, in a short time, even beyond her power of supplying, though her whole trade should be to her colonies——

12. It is an ill grounded opinion, that by the labour of slaves, America may possibly vie in cheapness of manufactures with Britain. The labour of slaves can never be so cheap here, as the labour of working men is in Britain. Any one may compute it. Interest of money is in the colonies from 6 to 10 per cent. Slaves, one with another, cost 30*l.* sterling per head. Reckon then the interest of the first purchase of a slave, the insurance or risk on his life, his clothing and diet, expenses in his sickness, and loss of time, loss by his neglect of business, (neglect is natural to the man, who is not to be benefited by his own care or diligence) expense of a driver to keep him at work, and his pilfering from time to time, almost every slave being, from the nature of slavery, a thief, and compare the whole amount with the wages of a manufacturer of iron or wool in England, you will see, that labour is much cheaper there than it ever can be by negroes here. Why then will Americans purchase slaves? Because slaves may be kept as long as a man pleases, or has occasion for their labour, while hired men are continually leaving their master (often in the midst of his business) and setting up for themselves. § 8.

13. As the increase of people depends on the encouragement of marriages, the following things must diminish a nation, viz. 1. The being conquered; for the conquerors will engross as many offices, and exact as much tribute or profit on the labour of the conquered, as will maintain them in their new establishment; and this diminishing the substance of the natives discourages their marriages, and so gradually diminishes them, while the foreigners increase. 2. Loss of territory: thus the Britons, being driven into Wales, and crowded together in a barren country, insufficient to support such great numbers, diminished, till the people bore a proportion to the produce; while the Saxons increased on their abandoned lands, till the island became full of English. And, were the English now driven into Wales by some foreign nation, there would, in a few years, be no more Englishmen in Britain, than there are now people in Wales. 3. Loss of trade: manufactures, exported, draw subsistence from foreign countries for numbers, who are thereby enabled to marry and raise families. If the nation be deprived of any branch of trade, and no new employment is found for the people occupied in that branch, it will soon be deprived of so many people. 4. Loss of food: suppose a nation has a fishery, which not only employs great numbers, but makes the food and subsistence of the people cheaper: if another nation becomes master of the seas, and prevents the fishery, the people will diminish in proportion as the loss of employ and dearness of provision makes it more difficult to subsist a family. 5. Bad government and insecure property: people not only leave such a country, and, settling abroad, incorporate with other nations, lose their native language, and become foreigners; but the industry of those that remain being discouraged, the quantity of subsistence in the country is lessened, and the support of a family becomes more difficult. So heavy taxes tend to diminish a people. 6. The introduction of slaves: the negroes brought into the English sugar islands have greatly diminished the whites there; the poor are by this means deprived of employment, while a few families acquire vast estates, which they spend on foreign luxuries; and educating their children in the habit of those luxuries, the same income is needed for the support of one, that might have maintained one hundred. The whites, who have slaves, not labouring, are enfeebled, and therefore not so generally prolific; the slaves being worked too hard, and ill fed, their constitutions are broken, and the deaths among them are more than the births; so that a continual supply is needed from Africa. The northern colonies, having few slaves, increase in whites. Slaves also pejorate the families that use them; the white children become proud, disgusted with labour, and, being educated in idleness, are rendered unfit to get a living by industry.

14. Hence the prince, that acquires new territory, if he finds it vacant, or removes the natives to give his own people room;—the legislator, that makes effectual laws for promoting of trade, increasing employment, improving land by more or better tillage, providing more food by fisheries, securing property, &c., and the man that invents new trades, arts or manufactures, or new improvements in husbandry, may be properly called *fathers of their nation*, as they are the cause of the generation of multitudes, by the encouragement they afford to marriage.

15. As to privileges granted to the married, (such as the *jus trium liberorum* among the Romans) they may hasten the filling of a country, that has been thinned by war or pestilence, or that has otherwise vacant territory, but cannot increase a people beyond the means provided for their subsistence.

16. Foreign luxuries, and needless manu-

factures, imported and used in a nation, do, by the same reasoning, increase the people of the nation, that furnishes them, and diminish the people of the nation, that uses them. Laws, therefore, that prevent such importations, and on the contrary, promote the exportation of manufactures to be consumed in foreign countries, may be called (with respect to the people that make them) *generative laws*, as, by increasing subsistence, they encourage marriage. Such laws, likewise, strengthen a country doubly, by increasing its own people, and diminishing its neighbours.

17. Some European nations prudently refuse to consume the manufactures of East India:—they should likewise forbid them to their colonies; for the gain to the merchant is not to be compared with the loss, by this means, of people to the nation.

18. Home luxury in the great, increases the nation's manufactures employed by it, who are many, and only tends to diminish the families that indulge in it, who are few. The greater the common fashionable expense of any rank of people, the more cautious they are of marriage. Therefore luxury should never be suffered to become common.

19. The great increase of offspring in particular families is not always owing to greater fecundity of nature, but sometimes to examples of industry in the heads, and industrious education, by which the children are enabled to provide better for themselves, and their marrying early is encouraged from the prospect of good subsistence.

20. If there be a sect, therefore, in our nation, that regards frugality and industry as religious duties, and educate their children therein, more than others commonly do, such sect must consequently increase more by natural generation than any other sect in Britain.

21. The importation of foreigners into a country, that has as many inhabitants as the present employments and provisions for subsistence will bear, will be in the end no increase of people, unless the new-comers have more industry and frugality than the natives, and then they will provide more subsistence, and increase in the country; but they will gradually eat the natives out.—Nor is it necessary to bring in foreigners to fill up any occasional vacancy in a country; for such vacancy (if the laws are good, § 14, 16) will soon be filled by natural generation. Who can now find the vacancy made in Sweden, France, or other warlike nations, by the plague of heroism 40 years ago; in France, by the expulsion of the Protestants; in England, by the settlement of her colonies; or in Guinea, by a hundred years exportation of slaves, that has blackened half America! The thinness of the inhabitants in Spain is owing to national pride, and idleness, and other causes, rather than to the expulsion of the Moors, or to the making of new settlements.

22. There is, in short, no bound to the prolific nature of plants or animals, but what is made by their crowding and interfering with each other's means of subsistence. Was the face of the earth vacant of other plants, it might be gradually sowed and overspread with one kind only, as for instance, with fennel; and were it empty of other inhabitants, it might, in a few ages, be replenished from one nation only, as for instance, with Englishmen. Thus there are supposed to be now upwards of one million of English souls in North America (though it is thought scarce 80,000 have been brought over sea) and yet perhaps there is not one the fewer in Britain, but rather many more, on account of the employment the colonies afford to manufactures at home. This million doubling, suppose but once in twenty-five years, will, in another century, be more than the people of England, and the greatest number of Englishmen will be on this side the water. What an accession of power to the British empire by sea as well as land! What increase of trade and navigation! What numbers of ships and seamen! We have been here but little more than a hundred years, and yet the force of our privateers in the late war, united, was greater, both in men and guns, than that of the whole British navy in queen Elizabeth's time. How important an affair then to Britain is the present treaty* for settling the bounds between her colonies and the French! and how careful should she be to secure room enough, since on the room depends so much the increase of her people!

23. In fine, a nation well regulated is like a polypus,† take away a limb, its place is soon supplied; cut it in two, and each deficient part shall speedily grow out of the part remaining. Thus, if you have room and subsistence enough, as you may say, by dividing, make ten polypuses out of one, you may, of one, make ten nations, equally populous and powerful; or, rather, increase a nation tenfold in numbers and strength.

R. Jackson, of London, to Dr. Franklin.

Remarks on some of the foregoing Observations.

DEAR SIR,—It is now near three years since I received your excellent *Observations on the Increase of Mankind, &c.* in which you have with so much sagacity and accuracy shown in what manner, and by what causes, that principal means of political grandeur is best promoted; and have so well supported those just inferences you have occasionally

* The treaty of Utrecht, in 1751.

† A water insect, well known to naturalists.

drawn, concerning the general state of our American colonies, and the views and conduct of some of the inhabitants of Great Britain.

You have abundantly proved, that natural fecundity is hardly to be considered, because the *vis generandi*, as far as we know, is unlimited, and because experience shows, that the numbers of nations is altogether governed by collateral causes, and among these none of so much force as the quantity of subsistence, whether arising from climate, soil, improvement of tillage, trade, fisheries, secure property, conquest of new countries, or other favourable circumstances.

As I perfectly concurred with you in your sentiments on these heads, I have been very desirous of building somewhat on the foundation you have there laid; and was induced, by your hints in the twenty-first section, to trouble you with some thoughts on the influence manners have always had, and are always likely to have, on the numbers of a people, and their political prosperity in general.

The end of every individual is its own private good. The rules it observes in the pursuit of this good are a system of propositions, almost every one founded in authority, that is, derive their weight from the credit given to one or more persons, and not from demonstration.

And this, in the most important as well as the other affairs of life, is the case even of the wisest and philosophical part of the human species; and that it should be so is the less strange, when we consider, that it is perhaps impossible to prove, that *being*, or life itself, has any other value than what is set on it by authority.

A confirmation of this may be derived from the observation, that, in every country in the universe, happiness is sought upon a different plan; and, even in the same country, we see it placed by different ages, professions, and ranks of men, in the attainment of enjoyments utterly unlike.

These propositions, as well as others framed upon them, become habitual by degrees, and, as they govern the determination of the will, I call them *moral habits*.

There are another set of habits, that have the direction of the members of the body, that I call therefore *mechanical habits*. These compose what we commonly call *the arts*, which are more or less liberal or mechanical, as they more or less partake of assistance from the operations of the mind.

The *cumulus* of the moral habits of each individual is the manners of that individual: the *cumulus* of the manners of individuals makes up the manners of a nation.

The happiness of individuals is evidently the ultimate end of political society; and political welfare, or the strength, splendour, and opulence of the state, have been always admitted, both by political writers, and the valuable part of mankind in general, to conduce to this end, and are therefore desirable.

The causes, that advance or obstruct any one of these three objects, are external or internal. The latter may be divided into physical, civil, and personal, under which last head I comprehend the moral and mechanical habits of mankind. The physical causes are principally climate, soil, and number of persons; the civil, are government and laws; and political welfare is always in a ratio composed of the force of these particular causes; a multitude of external causes, and all these internal ones, not only control and qualify, but are constantly acting on, and thereby insensibly, as well as sensibly, altering one another, both for the better and the worse, and this not excepting the climate itself.

The powerful efficacy of manners in increasing a people is manifest from the instance you mention, the quakers; among them industry and frugality multiply and extend the use of the necessaries of life; to manners of a like kind are owing the populousness of Holland, Swisserland, China, Japan, and most parts of Hindustan, &c. in every one of which, the force of extent of territory and fertility of soil is multiplied, or their want compensated by industry and frugality.

Neither nature nor art have contributed much to the production of subsistence in Swisserland, yet we see frugality preserves and even increases families, that live on their fortunes, and which, in England, we call the gentry; and the observation we cannot but make in the southern part of this kingdom, that those families, including all superior ones, are gradually becoming extinct, affords the clearest proof, that luxury (that is, a greater expense of subsistence than in prudence a man ought to consume) is as destructive as a disproportionable want of it; but in Scotland, as in Swisserland, the gentry, though one with another they have not one fourth of the income, increase in number.

And here I cannot help remarking, by the bye, how well founded your distinction is between the increase of mankind in old and new settled countries in general, and more particularly in the case of families of condition. In America, where the expenses are more confined to necessaries, and those necessaries are cheap, it is common to see above one hundred persons descended from one living old man. In England, it frequently happens, where a man has seven, eight, or more children, there has not been a descendant in the next generation, occasioned by the difficulties the number of children has brought on the

family, in a luxurious dear country, and which have prevented their marrying.

That this is more owing to luxury than mere want, appears from what I have said of Scotland, and more plainly from parts of England remote from London, in most of which the necessaries of life are nearly as dear, in some dearer than London, yet the people of all ranks marry and breed up children.

Again; among the lower ranks of life, none produce so few children as servants. This is, in some measure, to be attributed to their situation, which hinders marriage, but is also to be attributed to their luxury and corruption of manners, which are greater than among any other set of people in England, and is the consequence of a nearer view of the lives and persons of a superior rank, than any inferior rank, without a proper education, ought to have.

The quantity of subsistence in England has unquestionably become greater for several ages; and yet if the inhabitants are more numerous, they certainly are not so in proportion to our improvement of the means of support. I am apt to think there are few parts of this kingdom, that have not been at some former time more populous than at present. I have several cogent reasons for thinking so of a great part of the counties I am most intimately acquainted with; but as they were probably not all most populous at the same time, and as some of our towns are visibly and vastly grown in bulk, I dare not suppose, as judicious men have done, that England is less peopled than heretofore.

The growth of our towns is the effect of a change of manners, and improvement of arts, common to all Europe; and though it is not imagined, that it has lessened the country growth of necessaries, it has evidently, by introducing a greater consumption of them, (an infallible consequence of a nation's dwelling in towns) counteracted the effects of our prodigious advances in the arts.

But however frugality may supply the place, or prodigality counteract the effects, of the natural or acquired subsistence of a country, industry is, beyond doubt, a more efficacious cause of plenty than any natural advantage of extent or fertility. I have mentioned instances of frugality and industry united with extent and fertility. In Spain and Asia Minor, we see frugality joined to extent and fertility, without industry; in Ireland, we once saw the same; Scotland had then none of them but frugality. The change in these two countries is obvious to every one, and it is owing to industry not yet very widely diffused in either. The effects of industry and frugality in England are surprising; both the rent and the value of the inheritance of land depend on them greatly more than on nature, and this, though there is no considerable difference in the prices of our markets. Land of equal goodness lets for double the rent of other land lying in the same country, and there are many years purchase difference between different counties, where rents are equally well paid and secure.

Thus manners operate upon the number of inhabitants, but of their silent effects upon a civil constitution, history, and even our own experience, yields us abundance of proofs, though they are not uncommonly attributed to external causes: their support of a government against external force is so great, that it is a common maxim among the advocates of liberty, that no free government was ever dissolved, or overcome, before the manners of its subjects were corrupted.

The superiority of Greece over Persia was singly owing to their difference of manners; and that, though all natural advantages were on the side of the latter, to which I might add the civil ones; for though the greatest of all civil advantages, liberty, was on the side of Greece, yet that added no political strength to her, other than as it operated on her manners, and, when they were corrupted, the restoration of their liberty by the Romans, overturned the remains of their power.

Whether the manners of ancient Rome were at any period calculated to promote the happiness of individuals, it is not my design to examine; but that their manners, and the effects of those manners on their government and public conduct, founded, enlarged, and supported, and afterwards overthrew their empire, is beyond all doubt. One of the effects of their conquest furnishes us with a strong proof, how prevalent manners are even beyond the quantity of subsistence; for, when the custom of bestowing on the citizens of Rome corn enough to support themselves and families, was become established, and Egypt and Sicily produced the grain that fed the inhabitants of Italy, this became less populous every day, and the *jus trium liberorum* was but an expedient, that could not balance the want of industry and frugality.

But corruption of manners did not only thin the inhabitants of the Roman empire, but it rendered the remainder incapable of defence, long before its fall, perhaps before the dissolution of the republic; so that without standing disciplined armies, composed of men, whose moral habits principally, and mechanical habits secondarily, made them different from the body of the people, the Roman empire had been a prey to the barbarians many ages before it was.

By the mechanical habits of the soldiery, I mean their discipline, and the art of war; and that this is but a secondary quality, appears from the inequality that has in all ages been between raw, though well disciplined armies,

and veterans, and more from the irresistible force a single moral habit, religion, has conferred on troops, frequently neither disciplined nor experienced.

The military manners of the noblesse in France, compose the chief force of that kingdom, and the enterprising manners and restless dispositions of the inhabitants of Canada, have enabled a handful of men to harass our populous, and generally less martial colonies; yet neither are of the value they seem at first sight, because overbalanced by the defect they occasion of other habits, that would produce more eligible political good: and military manners in a people are not necessary in an age and country where such manners may be occasionally formed and preserved among men enough to defend the state; and such a country is Great Britain, where, though the lower class of people are by no means of a military cast, yet they make better soldiers than even the noblesse of France.

The inhabitants of this country, a few ages back, were to the populous and rich provinces of France, what Canada is now to the British colonies. It is true, there was less disproportion between their natural strength; but I mean, that the riches of France were a real weakness, opposed to the military manners founded upon poverty and a rugged disposition, than the character of the English; but it must be remembered, that at this time the manners of a people were not distinct from that of their soldiery, for the use of standing armies has deprived a military people of the advantages they before had over others; and though it has been often said, that civil wars give power, because they render all men soldiers, I believe this has only been found true in internal wars following civil wars, and not in external ones; for now, in foreign wars, a small army, with ample means to support it, is of greater force than one more numerous, with less. This last fact has often happened between France and Germany.

The means of supporting armies, and consequently the power of exerting external strength, are best found in the industry and frugality of the body of a people living under a government and laws, that encourage commerce: for commerce is at this day almost the only stimulus, that forces every one to contribute a share of labour for the public benefit.

But such is the human frame, and the world is so constituted, that it is a hard matter to possess one's self of a benefit, without laying one's self open to a loss on some other side; the improvements of manners of one sort often deprave those of another: thus we see industry and frugality under the influence of commerce, which I call a commercial spirit, tend to destroy, as well as support, the government it flourishes under.

Commerce perfects the arts, but more the mechanical than the liberal, and this for an obvious reason; it softens and enervates the manners. Steady virtue and unbending integrity are seldom to be found where a spirit of commerce pervades every thing; yet the perfection of commerce is, that every thing should have its price. We every day see its progress, both to our benefit and detriment here. Things, that *boni mores* forbid to be set to sale, are become its objects, and there are few things indeed *extra commercium*. The legislative power itself has been *in commercio*, and church livings are seldom given without consideration, even by sincere Christians, and, for consideration, not seldom to very unworthy persons. The rudeness of ancient military times, and the fury of more modern enthusiastic ones are worn off; even the spirit of forensic contention is astonishingly diminished, all marks of manners softening; but luxury and corruption have taken their places, and seem the inseparable companions of commerce and the arts.

I cannot help observing, however, that this is much more the case in extensive countries, especially at their metropolis, than in other places. It is an old observation of politicians, and frequently made by historians, that small states always best preserve their manners.—Whether this happens from the greater room there is for attention in the legislature, or from the less room there is for ambition and avarice, it is a strong argument, among others, against an incorporating union of the colonies in America, or even a federal one, that may tend to the future reducing them under one government.

Their power, while disunited, is less, but their liberty, as well as manners, is more secure; and, considering the little danger of any conquest to be made upon them, I had rather they should suffer something through disunion, than see them under a general administration less equitable than that concerted at Albany.

I take it, the inhabitants of Pennsylvania are both frugal and industrious beyond those of any province in America. If luxury should spread, it cannot be extirpated by laws. We are told by Plutarch, that Plato used to say, *It was a hard thing to make laws for the Cyrenians, a people abounding in plenty and opulence.*

But from what I set out with, it is evident, if I be not mistaken, that education only can stem the torrent, and, without checking either true industry or frugality, prevent the sordid frugality and laziness of the old Irish, and many of the modern Scotch, (I mean the inhabitants of that country, those who leave it for another being generally industrious) or the industry, mixed with luxury, of this capital, from getting ground, and, by rendering an-

cient manners familiar, produce a reconciliation between disinterestedness and commerce; a thing we often see, but almost always in men of a liberal education.

To conclude: when we would form a people, soil and climate may be found at least sufficiently good; inhabitants may be encouraged to settle, and even supported for a while; a good government and laws may be framed, and even arts may be established, or their produce imported: but many necessary moral habits are hardly ever found among those who voluntary offer themselves in times of quiet at home, to people new colonies; besides, that the moral, as well as mechanical habits, adapted to a mother country, are frequently not so to the new settled one, and to external events, many of which are always unforeseen. Hence it is we have seen such fruitless attempts to settle colonies, at an immense public and private expense, by several of the powers of Europe: and it is particularly observable, that none of the English colonies became any way considerable, till the necessary manners were born and grew up in the country, excepting those to which singular circumstances at home forced manners fit for the forming a new state.—I am, sir, &c.

R. J.

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*Plan, by Messieurs Franklin and Dalrymple, for benefiting distant unprovided Countries.**

Aug. 29. 1771

The country called in the maps New Zealand, has been discovered by the Endeavour, to be two islands, together as large as Great Britain: these islands, named Acpy-nomawée, and Tovy-poennammoo, are inhabited by a brave and generous race, who are destitute of *corn*, *fowls*, and *all quadrupeds*, except *dogs*.

These circumstances being mentioned lately in a company of men of liberal sentiments, it was observed, that it seemed incumbent on such a country as this, to communicate to all others the conveniences of life, which we enjoy.

Dr. Franklin, whose life has ever been directed to promote the true interest of society, said, "he would with all his heart *subscribe* to a voyage intended to communicate *in general* those benefits which we enjoy, to countries destitute of them in the remote parts of the globe." This proposition being warmly adopted by the rest of the company, Mr. Dalrymple, then present, was induced to offer to undertake the command on such an expedition.

On mature reflection, this scheme appears the more honourable to the national character of any which can be conceived, as it is grounded on the noblest principle of benevolence. Good intentions are often frustrated by letting them remain indigested; on this consideration Mr. Dalrymple was induced to put the outlines on paper, which are now published, that by an early communication there may be a better opportunity of collecting all the hints, which can conduce to execute effectually the benevolent purpose of the expedition, in case it should meet with general approbation.

On this scheme being shown to Dr. Franklin, he communicated his sentiments, by way of introduction, to the following effect:

"Britain is said to have produced originally nothing but *sloes*. What vast advantages have been communicated to her by the fruits, seeds, roots, herbage, animals, and arts of other countries! We are by their means become a wealthy and a mighty nation, abounding in all good things. Does not some *duty* hence arise from us towards other countries, still remaining in our former state?

"Britain is now the first maritime power in the world. Her ships are innumerable, capable by their form, size, and strength, of sailing on all seas. Our seamen are equally bold, skilful, and hardy; dextrous in exploring the remotest regions, and ready to engage in voyages to unknown countries, though attended with the greatest dangers. The inhabitants of those countries, our *fellow men*, have canoes only; not knowing iron, they cannot build ships; they have little astronomy, and no knowlege of the compass to guide them; they cannot therefore come to us, or obtain any of our advantages. From these circumstances, does not some duty seem to arise from us to them? Does not Providence, by these distinguishing favours, seem to call on us, to do something ourselves for the common interest of humanity!

"Those who think it their duty, to ask bread and other blessings daily from heaven, would they not think it equally a duty, to communicate of those blessings when they have received them, and show their gratitude to their great Benefactor by the only means in their power, promoting the happiness of his other children?

"Ceres is said to have made a journey through many countries to teach the use of corn, and the art of raising it.—For this single benefit the grateful nations deified her. How much more may Englishmen deserve such honour, by communicating the knowledge and use not of corn only, but of all the other enjoyments the earth can produce, and which they are now in possession of. *Communiter bona profundere, Deum est.*

"Many voyages have been undertaken with views of profit or of plunder, or to gratify resentment; to procure some advantage to ourselves, or do some mischief to others: but a

* These proposals were printed upon a sheet of paper, and distributed. The parts written by Dr. Franklin and Mr. Dalrymple are easily distinguished.

voyage is now proposed, to visit a distant people on the other side the globe; not to cheat them, not to rob them, not to seize their lands, or enslave their persons; but merely to do them good, and make them, as far as in our power lies, to live as comfortably as ourselves.

"It seems a laudable wish, that all the nations of the earth were connected by a knowledge of each other; and a mutual exchange of benefits: but a commercial nation particularly should wish for a general civilization of mankind, since trade is always carried on to much greater extent with people who have the arts and conveniences of life, than it can be with naked savages. We may therefore hope, in this undertaking, to be of some service to our country as well as to those poor people, who, however distant from us, are in truth related to us, and whose interest do, in some degree, concern every one who can say, *Homo sum, &c.*"

Scheme of a voyage, by subscription, to convey the conveniences of life, as fowls, hogs, goats, cattle, corn, iron, &c., to those remote regions, which are destitute of them, and to bring from thence such productions, as can be cultivated in this kingdom to the advantage of society, in a ship under the command of Alexander Dalrymple.

Catt or bark, from the the coal trade, of 350 tons, estimated at about	£ 2000
Extra expenses, stores, boats, &c. - -	3000
To be manned with 60 men at 4*l.* per man, per month. -	
240	
12	
per ann. 2880	
3	
Wages and provisions for 3 years -	8640
	13640
Cargo included, supposed -	£ 15000

The expenses of this expedition are calculated for *three* years: but the greatest part of the amount of wages will not be wanted till the ship returns, and a great part of the expense of provisions will be saved by what is obtained in the course of the voyage, by barter, or otherwise, though it is proper to make provision for contingencies.

To Dr. Percival.

Concerning the provision made in China against Famine.

I HAVE somewhere read, that in China an account is yearly taken of the number of people, and the quantities of provision produced. This account is transmitted to the emperor, whose ministers can thence foresee a scarcity, likely to happen in any province, and from what province it can best be supplied in good time. To facilitate the collecting of this account, and prevent the necessity of entering houses and spending time in asking and answering questions, each house is furnished with a little board, to be hung without the door during a certain time each year; on which board are marked certain words, against which the inhabitant is to mark the number and quantity, somewhat in this manner:

Men, Women, Children, Rice, or Wheat, Flesh, &c.

All under sixteen are accounted children, and all above, men and women. Any other particulars, which the government desires information of, are occasionally marked on the same boards. Thus the officers, appointed to collect the accounts in each district, have only to pass before the doors, and enter into their book what they find marked on the board, without giving the least trouble to the family. There is a penalty on marking falsely, and as neighbours must know nearly the truth of each other's account, they dare not expose themselves, by a false one, to each other's accusation. Perhaps such a regulation is scarcely practicable with us.

Positions to be examined, concerning national Wealth.

1. ALL food or subsistence for mankind arise from the earth or waters.

2. Necessaries of life, that are not food, and all other conveniences, have their value estimated by the proportion of food consumed while we are employed in procuring them.

3. A small people, with a large territory, may subsist on the productions of nature, with no other labour that of gathering the vegetables and catching the animals.

4. A large people, with a small territory, finds these insufficient, and, to subsist, must labour the earth, to make it produce greater quantities of vegetable food, suitable for the nourishment of men, and of the animals they intend to eat.

5. From this labour arises a *great increase* of vegetable and animal food, and of materials for clothing, as flax, wool, silk, &c. The superfluity of these is wealth. With this wealth we pay for the labour employed in building our houses, cities, &c. which are therefore only subsistence thus metamorphosed.

6. *Manufactures* are only *another shape* into which so much provisions and subsistence are turned, as were equal in value to the manufactures produced. This appears from hence, that the manufacturer does not, in fact, obtain from the employer, for his labour, *more* than a mere subsistence, including raiment, fuel, and shelter: all which derive their value from the provisions consumed in procuring them.

7. The produce of the earth, thus converted into manufactures, may be more easily carried to distant markets than before such conversion.

8. *Fair commerce* is, where equal values are exchanged for equal, the expense of transport included. Thus, if it costs A in England as much labour and charge to raise a bushel of wheat, as it costs B in France to produce four gallons of wine, then are four gallons of wine the fair exchange for a bushel of wheat, A and B meeting at half distance with their commodities to make the exchange. The advantage of this fair commerce is, that each party increases the number of his enjoyments, having, instead of wheat alone, or wine alone, the use of both wheat and wine.

9. Where the labour and expense of producing both commodities are known to both parties, bargains will generally be fair and equal. Where they are known to one party only, bargains will often be unequal, knowledge taking its advantage of ignorance.

10. Thus he, that carries one thousand bushels of wheat abroad to sell, may not probably obtain so great a profit thereon, as if he had first turned the wheat into manufactures, by subsisting therewith the workmen while producing those manufactures: since there are many expediting and facilitating methods of working, not generally known; and strangers to the manufactures, though they know pretty well the expense of raising wheat, are unacquainted with those short methods of working, and thence, being apt to suppose more labour employed in the manufactures than there really is, are more easily imposed on in their value, and induced to allow more for them than they are honestly worth.

11. Thus the advantage of having manufactures in a country does not consist, as is commonly supposed, in their highly advancing the value of rough materials, of which they are formed; since, though sixpennyworth of flax may be worth twenty shillings when worked into lace, yet the very cause of its being worth twenty shillings, is, that, besides the flax, it has cost nineteen shillings and sixpence in subsistence to the manufacturer. But the advantage of manufactures is, that under their shape provisions may be more easily carried to a foreign market; and by their means our traders may more easily cheat strangers. Few, where it is not made, are judges of the value of lace. The importer may demand forty, and perhaps get thirty shillings for that, which cost him but twenty.

12. Finally, there seem to be but three ways for a nation to acquire wealth. The first is by *war*, as the Romans did, by plundering their conquered neighbours. This is *robbery*.—The second by *commerce*, which is generally *cheating*.—The third by *agriculture*, the only *honest way*, wherein man receives a real increase of the seed thrown into the ground, in a kind of continual miracle wrought by the hand of God in his favour, as a reward for his innocent life, and his virtuous industry. B. FRANKLIN.

April 4, 1769.

The following extracts of a letter signed Columella, and addressed to the editors of the British Repository for select Papers on Agriculture, Arts, and Manufactures (see Vol. I.) will prepare those who read it, for the next paper

"GENTLEMEN,—There is now publishing in France a periodical work, called Ephemeridis du Citoyen, in which several points, interesting to those concerned in agriculture, are from time to time discussed by some able hands. In looking over one of the volumes of this work a few days ago, I found a little piece written by one of our countrymen, and which our vigilant neighbours had taken from the London Chronicle in 1766. The author is a gentleman well known to every man of letters in Europe, and perhaps there is none, in this age, to whom mankind in general are more indebted.

"That this piece may not be lost to our own country, I beg you will give it a place in your Repository: it was written in favour of the farmers, when they suffered so much abuse in our public papers, and were also plundered by the mob in many places."

To Messieurs the Public.

On the Price of Corn, and the Management of the Poor.

I AM one of that class of people, that feeds you all, and at present abused by you all;—in short, I am a *farmer*.

By your newspapers we are told, that God had sent a very short harvest to some other countries of Europe. I thought this might be in favour of Old England; and that now we should get a good price for our grain, which would bring millions among us, and make us flow in money: that to be sure is scarce enough.

But the wisdom of government forbade the exportation.

Well, says I, then we must be content with the market price at home.

No; say my lords the mob, you sha'nt have that. Bring your corn to market if you dare;—we'll sell it for you, for less money, or take it for nothing.

Being thus attacked by both ends *of the constitution*, the head and tail *of government*, what am I to do?

Must I keep my corn in the barn, to feed and increase the breed of rats?—be it so; they cannot be less thankful than those I have been used to feed.

Are we farmers the only people to be grudged the profits of our honest labour?—And why! One of the late scribblers against us gives a bill of fare of the provisions at my daughter's wedding, and proclaims to all the world, that we had the insolence to eat beef and pudding!—Has he not read the precept in the good book, *thou shalt not muzzle the mouth of the ox that treadeth out the corn;* or does he think us less worthy of good living than our oxen?

O, but the manufacturers! the manufacturers! they are to be favoured, and they must have bread at a cheap rate!

Hark ye, Mr. Oaf:—The farmers live splendidly, you say. And pray, would you have them hoard the money they get? Their fine clothes and furniture, do they make them themselves, or for one another, and so keep the money among them? Or, do they employ these your darling manufacturers, and so scatter it again all over the nation?

The wool would produce me a better price, if it were suffered to go to foreign markets; but that, Messieurs the Public, your laws will not permit. It must be kept all at home, that our *dear* manufacturers may have it the cheaper. And then, having yourselves thus lessened our encouragement for raising sheep, you curse us for the scarcity of mutton!

I have heard my grandfather say, that the farmers submitted to the prohibition on the exportation of wool, being made to expect and believe, that when the manufacturer bought his wool cheaper, they should also have their cloth cheaper. But the deuce a bit. It has been growing dearer and dearer from that day to this. How so? Why, truly, the cloth is exported: and that keeps up the price.

Now if it be a good principle, that the exportation of a commodity is to be restrained, that so our people at home may have it the cheaper; stick to that principle, and go thorough stitch with it. Prohibit the exportation of your cloth, your leather, and shoes, your iron-ware, and your manufactures of all sorts, to make them all cheaper at home. And cheap enough they will be, I will warrant you—till people leave off making them.

Some folks seem to think they ought never to be easy till England becomes another Lubberland, where it is fancied the streets are paved with penny-rolls, the houses tiled with pancakes, and chickens, ready roasted, cry, come eat me.

I say, when you are sure you have got a good principle, stick to it, and carry it through.—I hear it is said, that though it was *necessary and right* for the ministry to advise a prohibition of the exportation of corn, yet it was *contrary to law;* and also, that though it was *contrary to law* for the mob to obstruct wagons, yet it was *necessary and right.* Just the same thing to a tittle. Now they tell me, an act of indemnity ought to pass in favour of the ministry, to secure them from the consequences of having acted illegally.—If so, pass another in favour of the mob. Others say, some of the mob ought to be hanged, by way of example——If so,—but I say no more than I have said before, *when you are sure that you have a good principle, go through with it.*

You say, poor labourers cannot afford to buy bread at a high price, unless they had higher wages.—Possibly.—But how shall we farmers be able to afford our labourers higher wages, if you will not allow us to get, when we might have it, a higher price for our corn?

By all that I can learn, we should at least have had a guinea a quarter more if the exportation had been allowed. And this money England would have got from foreigners.

But, it seems, we farmers must take so much less, that the poor may have it so much cheaper.

This operates then as a tax for the maintenance of the poor. A very good thing, you will say. But I ask, why a partial tax? why laid on us farmers only? If it be a good thing, pray, messieurs the Public, take your share of it, by indemnifying us a little out of your public treasury. In doing a good thing, there is both honour and pleasure—you are welcome to your share of both.

For my own part, I am not so well satisfied of the goodness of this thing. I am for doing good to the poor, but I differ in opinion about the means. I think the best way of doing good to the poor, is, not making them easy *in* poverty, but leading or driving them *out* of it. In my youth I travelled much, and I observed in different countries, that the more public provisions were made for the poor the less they provided for themselves, and of course became poorer. And on the contrary, the less was done for them, the more they did for themselves, and became richer. There is no country in the world where so many provisions are established for them; so many hospitals to receive them when they are sick or lame, founded and maintained by voluntary charities; so many almshouses for the aged of both sexes, together with a solemn general law made by the rich to subject their estates to a heavy tax for the support of the poor. Under all these obligations, are our poor modest, humble, and thankful? And do they use their best endeavours to maintain themselves, and lighten our shoulders of this burden? On the contrary, I affirm, that there is no country in the world in which the poor are more idle, dissolute, drunken, and insolent. The day you passed that act you took away from before their eyes the greatest of all inducements to industry, frugality, and sobriety, by giving them a dependence on somewhat else than a careful accumulation during youth and health, for support in age or sickness. In

short, you offered a premium for the encouragement of idleness, and you should not now wonder, that it has had its effect in the increase of poverty. Repeal that law, and you will soon see a change in their manners; *Saint Monday* and *Saint Tuesday*, will soon cease to be holidays. SIX *days shalt thou labour*, though one of the old commandments long treated as out of date, will again be looked upon as a respectable precept; industry will increase, and with it plenty among the lower people; their circumstances will mend, and more will be done for their happiness by inuring them to provide for themselves, than could be done by dividing all your estates among them.

Excuse me, messieurs the Public, if upon this *interesting* subject, I put you to the trouble of reading a little of *my* nonsense; I am sure I have lately read a great deal of *yours*, and therefore from you (at least from those of you who are writers) I deserve a little indulgence.—I am yours, &c. ARATOR.*

On Freedom of Speech and the Press.—Published in the Pennsylvania Gazette, of November, 1737.

FREEDOM of speech is a principal pillar of a free government: when this support is taken away, the constitution of a free society is dissolved, and tyranny is erected on its ruins. Republics and limited monarchies derive their strength and vigour from a popular examination into the actions of the magistrates; this privilege in all ages has been, and always will be abused. The best of men could not escape the censure and envy of the times they lived in. Yet this evil is not so great as it may appear at first sight. A magistrate who sincerely aims at the good of society, will always have the inclinations of a great majority on his side, and an impartial posterity will not fail to render him justice.

Those abuses of the freedom of speech, are the exercises of liberty. They ought to be repressed; but to whom dare we commit the care of doing it. An evil magistrate intrusted with power to *punish for words*, would be armed with a weapon the most destructive and terrible. Under pretence of pruning off the exuberant branches he would be apt to destroy the tree.

It is certain, that he who robs another of his moral reputation, more richly merits a gibbet that if he had plundered him of his purse on the highway. *Augustus Cæsar*, under the specious pretext of preserving the character of the Romans from defamation, introduced the law whereby libelling was involved in the penalties of treason against the state. This law established his tyranny, and for one mischief which it prevented, ten thousand evils, horrible and afflicting, sprung up in its place. Thenceforward every person's life and fortune depended on the vile breath of informers. The construction of words being arbitrary, and left to the decision of the judges, no man could write or open his mouth without being in danger of forfeiting his head.

One was put to death for inserting in his history, the praises of Brutus. Another for styling Cassius the last of the Romans. Caligula valued himself for being a notable dancer; and to deny, that he excelled in that manly accomplishment, was high treason. This emperor raised his horse, the name of which was *Incitatus*, to the dignity of consul; and though history is silent, I do not question but it was a capital crime, to show the least contempt for that high officer of state! Suppose then any one had called the prime minister a *stupid animal*, the emperor's council might argue, that the malice of the libel was the more aggravated by its being true; and consequently more likely to excite the *family of this illustrious magistrate* to a breach of the peace, or to acts of revenge. Such a prosecution would to us appear ridiculous; yet, if we may rely upon tradition, there have been formerly, proconsuls in America, though of more malicious dispositions, hardly superior in understanding to the consul *Incitatus*, and who would have thought themselves libelled to be called by their *proper names*.

Nero piqued himself on his fine voice and skill in music: no doubt a laudable ambition! He performed in public, and carried the prize of excellence: it was afterwards resolved by all the judges as good law, that whosoever would *insinuate* the least doubt of Nero's pre-eminence in the *noble art of fiddling*, ought to be deemed a traitor to the state.

By the help of inferences, and innuendoes, treasons multiplied in a prodigious manner. Grief was treason:—a lady of noble birth was put to death for bewailing the death of her *murdered son*:—silence was declared an *overt act*, to prove the treasonable purposes of the heart: looks were construed into treason:—a serene open aspect was an evidence, that the person was pleased with the calamities that befel the emperor:—a severe thoughtful countenance was urged against the man that wore it, as a proof of his plotting against the state:—*dreams* were often made capital offences. A new species of informers went about Rome, insinuating themselves into all companies to fish out their dreams, which the holy priests, (O nefarious wickedness!) interpreted into high treason. The Romans were so terrified by this strange method of

* Mr. Owen Ruffhead, being employed in preparing a *digest of the British poor laws*, communicated a copy of it to Dr. Franklin for his advice. Dr. Franklin recommended, that provision should be made therein for the printing on a sheet of paper, and dispersing, in each parish, annual accounts of every disbursement and receipt of its officers. In some of the American states this measure is pursued with success.

juridical and penal process, that far from discovering their dreams, they durst not own that they slept. In this terrible situation, when every one had so much cause to fear, even *fear* itself was made a crime. Caligula, when he put his brother to death, gave it as a reason to the senate, that the youth was afraid of being murdered. To be eminent in any virtue, either civil or military, was the greatest crime a man could be guilty of.—*O virtutes certissimum exitium.*

These were some of the effects of the Roman law against libelling:—those of the British kings that aimed at despotic power, or the oppression of the subject, continually encouraged prosecutions for words.

Henry VII. a prince mighty in politics, procured that act to be passed, whereby the jurisdiction of the star-chamber, was confirmed and extended. Afterwards Empson and Dudley, two voracious dogs of prey, under the protection of this high court, exercised the most merciless acts of oppression. The subjects were terrified from uttering their griefs, while they saw the thunder of the star-chamber pointed at their heads. This caution, however, could not prevent several dangerous tumults and insurrections: for when the tongues of the people are restrained, they commonly discharge their resentments by a more dangerous organ, and break out into open acts of violence.

During the reign of Henry VIII. a high-spirited monarch! every light expression, which happened to displease him, was construed by his supple judges, into a libel, and sometimes extended to high treason. When queen Mary of cruel memory ascended the throne, the parliament, in order to raise a *fence* against the violent prosecutions for words, which had rendered the lives, liberties, and properties of all men precarious, and, perhaps dreading the furious persecuting spirit of this princess, passed an act whereby it was declared, "That if a libeller doth go so high, as to libel against king or queen, by denunciation, the judges shall lay no greater fine on him than one hundred pounds, with two months imprisonment, and no corporeal punishment: neither was this sentence to be passed on him, except the accusation was fully proved by two witnesses, who were to produce a certificate of their good demeanour for the credit of their report."

This act was confirmed by another, in the seventh year of the reign of queen Elizabeth; only the penalties were heightened to two hundred pounds and three months imprisonment. Notwithstanding she rarely punished invectives, though the malice of the papists was indefatigable in blackening the brightest characters, with the most impudent falsehoods, she was often heard to applaud that rescript of *Theodosius.** If any person spoke ill of the emperor, through a foolish rashness, and inadvertency, it is to be despised; if out of madness, it deserves pity; if from malice and aversion, it calls for mercy.

Her successor king James I. was a prince of a quite different genius and disposition; he used to say, that while he had the power of making judges and bishops, *he could have what law and gospel he pleased.* Accordingly he filled those places with such as prostituted their professions to his notions of prerogative. Among this number, and I hope it is no discredit to the profession of the law, its great oracle, *sir Edward Coke*, appears. The star-chamber, which in the time of Elizabeth, had gained a good repute, became an intolerable grievance, in the reign of this *learned monarch.*

But it did not arrive at its meridian altitude, till Charles I. began to wield the sceptre. As he had formed a design to lay aside parliaments, and subvert the popular part of the constitution, he very well knew, that the form of government could not be altered, without laying a restraint on freedom of speech, and the liberty of the press: therefore he issued his royal mandate, under the great seal of England, whereby he commanded his subjects, under pain of his displeasure, not to prescribe to him any time for parliaments. Lord Clarendon, upon this occasion, is pleased to write "that all men took themselves to be prohibited under the penalty of censure (the censure of the star-chamber,) which few men cared to incure so much as to speak of parliaments; or so much as to mention, that parliaments were again to be called."

The king's ministers, to let the nation see they were absolutely determined to suppress all freedom of speech, caused a prosecution to be carried on by the attorney-general against three members of the house of commons, for words spoken in that house, Anno. 1628. The member pleaded to the information, that expressions in parliament ought only to be examined and punished there. This notwithstanding, *they were all three condemned as disturbers of the state*; one of these gentlemen, sir John Elliot, was fined two thousand pounds, and sentenced to lie in prison till it was paid. His lady was denied admittance

* Si quis imperatori maledixerit non statim injuria censetur et eo nomine punitur; sed distinguitur, an ex levitate processerit, et sic contemnitur, an ex insania et miseratione digna censetur, an ex injuria et sic remittenda declaratur.

Note.—A *Rescript* was an answer delivered by the emperor, when consulted in some difficult question or point in law: the judges were wholly to be directed by it, whenever such a case came before them. For *the the will of the king gives vigour to the law.* (*Voluntas regis habet vigorem legis*) is a fundamental principle in the civil law. The rescript mentioned above, was not only delivered by *Theodosius*, but by two emperors, *Honorius* and *Arcadius*.

to him, even during his sickness; consequently his punishment comprehended an additional sentence of divorce. This patriot having endured many years imprisonment, sunk under the oppression, and died in prison: this was such a wound to the authority and rights of parliament, that even after the restoration, the judgment was revered by parliament.

That Englishmen of all ranks might be effectually intimidated from publishing their thoughts on any subject, except on the side of the court, his majesty's ministers caused an information, for several libels, to be exhibited in the star-chamber, against Messrs. *Prynn*, *Burton*, and *Bastwick*. They were each of them fined five thousand pounds, and adjudged to lose their ears on the pillory, to be branded on the cheeks with hot irons, and to suffer perpetual imprisonment! Thus these three gentlemen, each of worth and quality in their several professions, viz. divinity, law, and physic, were, for no other offence, than writing on controverted points of church-government, exposed on public scaffolds, and stigmatized and mutilated, as common signal rogues, or the most ordinary malefactors.

Such corporeal punishments, inflicted with all the circumstances of cruelty and infamy, bound down all other gentlemen, under a servile fear of the like treatment; so that for several years no one durst publicly speak or write in defence of the liberties of the people; which the king's ministers, his privy council, and his judges, had trampled under their feet. The spirit of the administration looked hideous and dreadful: the hate and resentment which the people conceived against it, for a long time lay smothered in their breasts, where those passions festered and grew venomous, and at last discharged themselves by an armed and vindictive hand.

King Charles II. aimed at the subversion of the government; but concealed his designs under a deep hypocrisy: a method which his predecessor, in the beginning of his reign, scorned to make use of. The father, who affected a high and rigid gravity, discountenanced all barefaced immorality. The son, of a gay, luxurious disposition, openly encouraged it: thus their inclinations being different, the restraint laid on some authors, and the encouragement given to others, were managed after a different manner.

In this reign a licenser was appointed for the stage and the press; no plays were encouraged but what had a tendency to debase the minds of the people. The orignal design of comedy was perverted; it appeared in all the shocking circumstances of immodest *double entendre*, obscure description, and lewd representation. Religion was sneered out of countenance, and public spirit ridiculed as an awkward old-fashioned virtue; the fine gentleman of the comedy, though embroidered all over with wit, was a consummate debauchee; and a fine lady, though set off with a brilliant imagination, was an impudent coquette. Satire, which in the hands *Horace*, *Juvenal*, and *Boileau*, was pointed with a generous resentment against vice, now became the declared foe of virtue and innocence. As the city of London, in all ages, as well as the time we are speaking of, was remarkable for its opposition to arbitrary power, the poets levelled all their artillery against the metropolis, in order to bring the citizens into contempt: an alderman was never introduced on the theatre, but under the complicated character of a sneaking, canting hypocrite; a miser and a cuckold; while the court-wits, with impunity, libelled the most valuable part of the nation. Other writers, of a different stamp, with great learning and gravity, endeavoured to prove to the English people, that slavery was *jure divino*. Thus the stage and the press under the direction of a licenser, became battering engines against religion, virtue, and liberty. Those who had courage enough to write in their defence, were stigmatised as schismatics, and punished as disturbers of the government.

But when the embargo on wit was taken off, *sir Richard Steele* and *Mr. Addison* soon rescued the stage from the load of impurity it laboured under; with an inimitable address, they strongly recommended to our imitation the most amiable, rational, manly characters; and this with so much success, that I cannot suppose there is any reader to day conversant in the writings of those gentlemen, that can taste with any tolerable relish the comedies of the once admired *Shadwell*. Vice was obliged to retire and give place to virtue: this will always be the consequence when truth has fair play: falsehood only dreads the attack, and cries out for auxiliaries: truth never fears the encounter: she scorns the aid of the secular arm, and triumphs by her natural strength.

But to resume the description of the reign of Charles II. the doctrine of servitude was chiefly managed by *sir Roger Lestrange*.—He had great advantages in the argument, being licenser for the press, and might have carried all before him, without contradiction, if writings on the other side of the question had not been printed by stealth. The authors, whenever found, were prosecuted as seditious libellers; on all these occasions, the king's counsel, particularly *Sawyer* and *Finch*, appeared most abjectly obsequious to accomplish the ends of the court.

During this *blessed* management, the king had entered into a secret league with France, to render himself absolute, and enslave his subjects. This fact was discovered to the world by doctor *Jonathan Swift*, to whom *sir William Temple* had intrusted the publication of his works.

Sidney, the sworn foe of tyranny, was a gentleman of noble family, of sublime understanding, and exalted courage. The ministry were resolved to remove so great an obstacle out of the way of their designs. He was prosecuted for high treason. The overt act charged in the indictment, was a libel found in his private study. Mr. Finch, the king's own solicitor-general, urged, with great vehemency, to this effect, "that the *imagining* the death of the king is *treason*, even while that imagination remains concealed in the mind; though the law cannot punish such secret treasonable thoughts, till it arrives at the knowledge of them by some overt act. That the matter of the libel composed by Sidney was an *imagining how to compass the death of king Charles II.*; and the writing of it was an overt act of the treason; for that to write was to act. (*Scribere est agere.*") It seems that the king's counsel in this reign had not received the same direction as queen Elizabeth had given her's; she told them they were to look upon themselves as retained not so much—(*pro domina regina*, as *pro domina veritate*)—for the power of the queen as for the power of truth.

Mr. Sidney made a strong and legal defence. He insisted that all the words in the book, contained no more than general speculations on the principles of government, free for any man to write down; especially since the same are written in the parliament rolls and in the statute laws.

He argued on the injustice of applying by innuendoes, general assertions concerning principles of government, as overt acts, to prove the writer was compassing the death of the king; for then no man could write of things done even by our ancestors, in defence of the constitution and freedom of England, without exposing himself to capital danger.

He denied that *scribere est agere*, but allowed that writing and publishing is to act, (*Scribere et publicare est agere*) and therefore he urged, that as his book had never been published nor imparted to any person, it could not be an overt act, within the statutes of treasons, even admitting that it contained treasonable positions; that on the contrary it was a *covert fact*, locked up in his private study, as much concealed from the knowledge of any man, as if it where locked up in the author's mind. This was the substance of Mr. Sidney's defence: but neither law, nor reason, nor eloquence, nor innocence ever availed, where *Jefferies* sat as judge. Without troubling himself with any part of the defence, he declared in a rage, that Sidney's *known principles* were a *sufficient* proof of his intention to compass the death of the king.

A packed jury therefore found him guilty of high treason: great applications were made for his pardon. He was executed as a traitor.

This case is a pregnant instance of the danger that attends a law for punishing words, and of the little security the most valuable men have for their lives, in that society where a judge by remote inferences and distant innuendoes may construe the most innocent expressions into capital crimes. *Sidney*, the British *Brutus*; the warm, the steady friend of *liberty*; who from a diffusive love to mankind left them that invaluable legacy, his immortal discourses on government, was for these very discourses, murdered by the hands of lawless power.

After the revolution of 1688, when law and justice were again restored, the attainder of this great man was reversed by parliament.

"Being in Holland, (says bishop Burnet,) the princess of Orange, afterwards queen Mary, asked me what had sharpened the king her father so much against Mr. Jurieu? I told her he had writ with great indecency of Mary queen of Scots, which cast reflections on them that were descended from her. The princess said, Jurieu was to support the cause he defended, and to expose those that persecuted it, in the best way he could; and if what he said of Mary queen of Scots was true, he was not to be blamed who made that use of it: and she added, that if princes would do ill things, they must expect that the world will take revenge on their memories, since they cannot reach their persons. That was but a small suffering, far short of what others suffered at their hands."

In the former part of this paper it was endeavoured to prove by historical facts, the fatal dangers that necessarily attend a restraint of freedom of speech and the liberty of the press: upon which the following reflection naturally occurs, viz. *that whoever attempts to suppress either of these our natural rights, ought to be regarded as an enemy to liberty and the constitution.* An inconveniency is always to be suffered when it cannot be removed without introducing a worse.

I proceed in the next place to inquire into the nature of the English laws, in relation of libelling. To acquire a just idea of them, the knowledge of history is necessary, and the genius and disposition of the prince is to be considered in whose time they are introduced and put in practice.

To infuse into the minds of the people an ill opinion of a just administration, is a crime that deserves no indulgence; but to expose the evil designs or weak management of a magistrate is the duty of every member of society. Yet king James I. thought it an unpardonable presumption in the subject to pry into the (*arcana imperii*,) the secrets of kings. He imagined that the people ought to believe the authority of the government infallible, and that their submission should be implicit. It may therefore be reasonably presumed, that

the judgment of the star-chamber, concerning libels, was influenced by this monarch's notions of government. No law could be better framed to prevent people from publishing their thoughts on the administration, than that which makes no distinction, whether a libel be true or false. It is not pretended that any such decision is to be found in our books, before this reign. That is not at all to be wondered at; king James was the first of the British monarchs, that laid claim to a *divine right*.

It was a refined piece of policy in Augustus Cæsar, when he proposed a law to the senate, whereby invectives against private men were to be punished as treason. The pill was finely gilded and easily swallowed; but the Romans soon found that the preservation of their characters was only a pretext:—to preserve inviolable the sacred name of Cæsar was the real design of the law. They quickly discovered the intended consequence—if it be treason to libel a private person, it cannot be less than blasphemy to speak ill of the emperor.

Perhaps it may not appear a too refined conjecture, that the star-chamber acted on the same views with Augustus, when they gave that decision which made it criminal to publish truth of a private person as well as a magistrate. I am the more inclined to this conjecture from a passage in lord chief justice Richardson's speech, which I find in the trial in the star-chamber, against Mr. Prynn, who was prosecuted there for a libel. "*If subjects have an ill prince*," says the judge, "*marry, what is the remedy? they must pray to God to forgive him: Mr. Prynn saith there were three worthy Romans that conspired to murder Nero. This is most horrible.*"

Tremendous wickedness indeed, my lord chief justice! Where slept the thunder when these three detestable Romans, unawed by the sacred majesty of the diadem, with hands sacrilegious and accursed, took away the precious life of that *imperial wolf*, that true epitome of the *Lord's anointed*;—who had murdered his own mother; who had put to death *Seneca* and *Burrhus*, his two best friends and benefactors;—who was drenched in the blood of mankind, and wished and endeavoured to extirpate the human race! I think my lord chief justice has clearly explained the true intent and meaning of the star-chamber doctrine; it centres in the most abjectively passive obedience.

The punishment for writing truth, is pillory, loss of ears, branding the face with hot irons, fine, and imprisonment, at the discretion of the court. Nay, the punishment is to be *heightened in proportion to the truth of the facts* contained in the libel. But if this monstrous doctrine could have been swallowed down by that worthy jury, who were on the trial of the seven bishops, prosecuted for a libel, in the reign of James II., the liberties of Britain, in all human probability, had been lost, and slavery established in the three kingdoms.

This was a cause of the greatest expectation and importance that ever came before the judges in Westminster-hall.

The bishops had petitioned the king, that he would be graciously pleased not to insist upon their reading in the church his majesty's declaration for liberty of conscience, because it was founded on a dispensing power, declared illegal in parliament; and they said, that they could not in prudence, honour, or conscience, so far make themselves parties to it. In the information exhibited by the attorney-general, the bishops were charged with writing and publishing a false, malicious, and seditious libel, (under pretence of a petition) in diminution of the king's prerogative, and contempt of his government.

Sawyer and *Finch* were among the bishops' counsel, the former had been attorney, the latter solicitor-general. In these stations they had served the court only too well. They were turned out because they refused to support the dispensing power. *Powis* and *Williams*, who stood in their places, had great advantages over them, by reflecting on the precedents and proceedings, while those were of the king's counsel. "What was good law for *Sidney* and others, ought to be law for the *bishops*; God forbid that in a court of justice any such distinction should be made."

Williams took very indecent liberties with the prelates, who were obliged to appear in court: he reproached them with acting repugnant to their doctrine of passive obedience: he reminded them of their preaching against himself, and stirring up their clergy to libel him in their sermons. For Williams had been for many years a bold pleader in all causes against the court. He had been speaker in two successive parliaments, and a zealous promoter of the bill of exclusion. *Jefferies* had fined him ten thousand pounds for having licensed, in the preceding reign, by virtue of an order of the house of commons, the printing of *Dangerfield's Narrative*, which charged the duke of York with conspiracies of a black complexion. This gentleman had no principles, was guided by his own interests, and so wheeled about to the court. The king's counsel having produced their evidences as to the publication of the petition, the question then to be debated was, whether it contained libellous matter or not.

It was argued in substance for the bishops, that the matter could not be libellous because it was true; sir Robert Sawyer makes use of the words *false* and *libellous*, as synonymous

terms, through the whole course of his argument; and so does Mr. Finch: accordingly they proceeded to show by the votes and journals of the parliament, which were brought from the tower to the court, that the kings of England, in no age, had any power to dispense with or set aside the laws of the land: and consequently, the bishops' petition, which denied that his majesty had any dispensing power, could not be false, nor libellous, nor in contempt or diminution of the king's prerogative, as no such power was ever annexed to it. This was the foundation laid down through the whole course of the debate, and which guided and governed the verdict.

It was strongly urged in behalf of the king, that the only point to be looked into was, whether the libel be reflecting or scandalous, and not whether it be true or false. That the bishops had injured and affronted the king by presuming to prescribe to him their opinions in matters of government; that under pretence of delivering a petition, they come and tell his majesty, he has commanded an illegal thing; that by such a proceeding, they threw dirt in the king's face, and so were libellers with a witness.

Previous to the opinions of the judges, it will be necessary to give the reader a short sketch of their characters; *Wright* was before on the bench, and made chief justice, as a proper tool to support the dispensing power. *Rapin*, mentioning this trial, calls *Holloway* a creature of the court; but that excellent historian was mistaken in this particular; *Powell* was a judge of obstinate integrity. His obstinacy gained him immortal honour. *Allibone* was a professed papist, and had not taken the tests, consequently he was no judge, and his opinion of no authority. Wright, in his charge, called the petition a libel, and declared that any thing which disturbs the government is within the case *de libellis famosis* (the star-chamber doctrine.) Holloway told the jury, that the end and intention of every action, is to be considered; and that as the bishops had no ill intention, in delivering their petition, it could not be deemed malicious or libellous. Powell declared, that falsehood and malice were two essential qualities of a libel, which the prosecutor is obliged to prove. Allibone replied upon Powell, that we are not to measure things from any truth they have in themselves, but from the aspect they have on the government; for that every tittle of a libel may be true, and yet be a libel still.

The compass of this paper would not admit me to quote the opinion of the judges at length; but I have endeavoured, with the strictest regard to truth, to give the substance and effect of them as I read them.

It has been generally said, that the judges, on this trial, were equally divided in their opinions; but we shall find a majority on the bench in favour of the bishops, when we consider, that the cause, as to Allibone, was beyond the jurisdiction of the court (*coram non judice.*)

Here then is a late authority, which sets aside, destroys, and annuls the doctrine of the star-chamber, reported by sir Edward Coke, in his case *de libellis famosis.*

Agreeable to this late impartial decision, is the civil law, concerning libels. It is there said, that calumny is criminal only when it is false, (*calumniaria est falsa crimina dicere ;*) and not criminal when it is true, (*vera crimina dicere,*) and therefore a writing, that insinuates a falsehood, and does not directly assert it, cannot come under the denomination of a libel, (*Non libellus famosus quoad accusatione quia non constat directis assertionibus, in quibus venit verum aut falsum quod omnino requirit libellus famosus.*) In those cases where the design to injure does not evidently appear from the nature of the words, the intention is not to be presumed, it is incumbent on the plaintiff to prove the malice, (*animus injuriandi non præsumitur et incumbit injuriatio cum probare.*)

These resolutions of the Roman lawyers bear so great a conformity with the sentiments of Powell and Holloway, that it seems they had them in view, when they gave their opinions. Sir Robert Sawyer makes several glances at them, in his argument; but throwing that supposition out of the question, natural equity, on which the civil law is founded, (the principle of passive obedience always excepted) would have directed any impartial man of common understanding to the same decision.

In civil actions an advocate should never appear but when he is persuaded the merits of the cause lie on the side of his client. In criminal actions it often happens, that the defendant in strict justice deserves punishment; yet a counsel may oppose it when a magistrate cannot come at the offender, without making a breach in the barriers of liberty, and opening a flood-gate to arbitrary power. But when the defendant is innocent, and unjustly prosecuted, his counsel may, nay ought to take all advantages, and use every stratagem that skill, art, and learning can furnish him with. This last was the case of Zenger, at New York, as appears by the printed trial, and the verdict of the jury. It was a popular cause. The liberty of the press in that province depended on it. On such occasions the dry rules of strict pleading are never observed. The counsel for the defendant sometimes argues from the known principles of law; then raises doubts and difficulties, to confound his antagonist; now applies himself to the affections; and chiefly endeavours to raise the passions. Zenger's defence is not to be considered in all those different lights; yet a gentleman of Barbadoes assures us, that it was published as

a solemn argument in the laws, and therefore writes a very elaborate confutation of it.

I propose to consider some of his objections, as far as they interfere with the freedom of speech and the liberty of the press, contended for in this paper.

This author begun his remarks, by giving us a specimen of Mr. Hamilton's method of reasoning. It seems the attorney-general on the first objected, that a negative could not be proved; to which the counsel for Zenger replied, that there are many exceptions to that general rule; and instanced when a man is charged with killing another; if he be innocent, he may prove the man said to be killed, to be still alive. The remarker will not allow this to be a good proof of the negative, for, says he, "this is no more than one instance of one affirmative, being destroyed by another that infers a negative of the first." It cost me some time to find out the meaning of this superlative nonsense; and I think I have at last discovered it. What he understands by the first affirmative, is the instance of the man's being charged with killing another; the second affirmative, is the man's being alive; which certainly infers, that the *man was not killed:* which is undoubtedly a negative of the first. But the remarker of Barbadoes, blunders strangely. Mr. Hamilton's words are clear. He says, the party accused is on the negative, viz. that he *did not kill;* which he may prove by an affirmative, viz. that the man said to be killed, is still alive.

Again, "at which rate," continues our Barbadoes author, "most negatives may be proved." There indeed the gentleman happened to stumble right; for every negative, capable of proof, can only be proved after the same manner, namely by an affirmative. "But then," he adds, "that a man will be put upon proving, he did not kill, because such proof may be had sometimes, and so the old rule will be discarded." This is clearly a *non sequitur*, (not an argument;) for though a man may prove a negative, if he finds it for his advantage, it does by no means follow that he shall be obliged to do it, and so that old rule will be preserved.

After such notable instances of a blundering unlogical head, we are not to be surprised at the many absurdities and contradictions of this author, which occur in the sequel of his *No-argument*.

But I shall only cite those passages where there is a probability of guessing at his meaning, for he has so preposterously jumbled together this little stock of ideas, that even after the greatest efforts, I could find but very little sense or coherence in them. I should not however, have discontinued my labour, had I not been apprehensive of the fate of poor *Don Quixotte*, who ran distracted by endeavouring to unbowel the sense of the following passage—"The reason of your unreasonablenese, which against my reason is wrought, doth so weaken my reason, as with all reason I do justly complain." There are several profound passages, in the remarks, not a whit inferior to this. The dissertation on the negative and affirmative, I once thought to be an exact counterpart of it.

Our author labours to prove that a libel, whether true or false, is punishable. The first authority for this purpose, is the case of John de Northampton, adjudged in the reign of Edward III. Northampton had wrote a libellous letter to one of the king's council, purporting that the judges would do no great thing, at the commandment of the king, &c., the said John was called, and the court pronounced judgment against him on those grounds, that the letter contained no truth in it, and might incense the king against his judges. Mr. Hamilton says, that by this judgment it appears, the libellous words were utterly false, and that the falsehood was the crime, and is the ground of the judgment. The remarker rejects this explanation, and gives us an ingenious comment of his own. First, he says, there is neither truth nor falsehood in the words, at the time they were wrote. Secondly, that they were the same as if John had said the roof of Westminster-hall would fall on the judges. Thirdly, that the words taken by themselves have no ill meaning. Fourthly, that the judges ought to do their duty, without any respect to the king's commandment (they are sworn so to do.) Fifthly, he asks where then was the offence? he answers, sixthly, the record shows it. Seventhly, he says that the author of the letter was an attorney of the court, and by the contents thereof, (meaning the contents of the letter not the contents of the court) he presumes to undertake for the behaviour of the judges. Eighthly, that the letter was addressed to a person of the king's council. Ninthly, that he might possibly communicate it to the king. Tenthly, that it might naturally incense the king against the court. Eleventhly, that great things were done in those days by the king's commandment, for the judges held their post at will and pleasure. Twelfthly, that it was therefore proper for the judges to assert, that the letter contained no truth, in order to acquit themselves to the king. Thirteenthly, that the judges asserted a falsehood, only to acquit themselves to his majesty, because what they asserted was no grounds of their judgment. Fourteenthly and lastly, the commentator avers (*with much modesty*) that all this senseless stuff, is a plain and natural construction of the case; but he would not have us take it wholly on his own word, and undertakes to show that the case was so un-

derstood by *Noy*, in whose mouth our author puts just such becoming nonsense as he entertained us with from himself.

It requires no great penetration to make this discussion in question appear reasonable and intelligible. But it ought first to be observed that Edward III. was one of the best and wisest, as well as the bravest of our kings, and that the law had never a freer course than under his reign. Where the letter mentions that the judges would do no great things (*i. e.* illegal things) by the king's commandment, it was plainly insinuated, that the judges suspected that the king might command them to do illegal things. Now by the means of that letter the king being led to imagine that the judges harboured a suspicion so unworthy of him, might be justly incensed against them: therefore the record truly says, that the letter was utterly false, and that there was couched under it, an insinuation (certainly malicious) that might raise an indignation in this king against the court, &c., since it evidently appears, that not only the falsehood, but also the malice was the ground of the judgment.

I agree with the remarker, that Noy, citing this case, says that the letter contained no ill, yet the writer was punished; but these words are absolutely as they stand in the remarks attached from the context. *Noy* adduces Northampton's case, to prove that a man is punishable for contemplating without a cause, though the words of the complaint (simply considered) should contain no ill in them, it is not natural to inquire whether the application be just: it is only an expression of a counsel at the bar. The case was adjourned, and we hear no more of it. Yet these words of Noy, the remarker, would pass on the reader as a good authority. "This book, therefore," quoth he, referring to Godbolt's reports, "follows the record of Northampton's case, and says, that because it might incense the king against the judges he was punished;" which is almost a translation of *Prætextu cujus*, &c. I could readily pardon our author's gibberish, and want of apprehension, but cannot so easily digest his insincerity.

The remarker in the next place proceeds to the trial of the seven bishops; I shall quote his own words, though I know they are so senseless and insipid, that I run the risk of trespassing on the reader's patience; however here they be, "Mr. Justice Powell also does say, that to make it a libel, it must be *false*, it must be *malicious*, and it must *tend to sedition*." Upon which words of this learned and worthy judge, I would not presume to offer any comment, except that which other words of his own afford, that plainly show in what sense he then spoke. His subsequent words are these: "the bishops tell his majesty, it is not out of averseness," &c. So that the judge put the whole upon that single point, whether it be true that the king had a dispensing power or not; which is a question of law, and not of fact, and accordingly the judge appeals to his own reading in the law, not to witnesses or other testimonies for a decision of it."

Now the bishops had asserted in the libel they were charged with, that the dispensing power, claimed by the king in his declaration, was illegal. The remarker, by granting that the prelates might prove part of their assertion, viz. that the dispensing power was illegal, which is a question of law, necessarily allows them to prove the other part of their assertion, viz. That his majesty had claimed such a power, which is a question of fact; for the former could not be decided without proving or admitting the latter, and so in all other cases, where a man publishes of a magistrate, that he has acted, or commanded an illegal thing, if the defendant shall be admitted to prove the mode or illegality of the thing, it is evidently implied that he may prove the thing itself; so that on the gentleman's own premises, it is a clear consequence that a man prosecuted for a libel, shall be admitted to give the truth in evidence. The remarker has a method of reasoning peculiar to himself; he frequently advances arguments, which directly prove the very point he is labouring to confute.

But in truth, judge *Powell's* words would not have given the least colour to such a ridiculous distinction, if they had been fairly quoted. He affirms with the strongest emphasis, that to make it a libel, it must be *false*, it must be *malicious*, and it must *tend to sedition*. (Let it be observed that these three qualities of a libel against the government are in the *conjunctive*) his subsequent words are these, "as to the falsehood, I see nothing that is offered by the king's counsel; nor any thing as to the malice." Here the judge puts the proof both of the falsehood and malice on the persecutor; and though the falsehood in this case was a question of law, it will not be denied, but that the malice was a question of fact. Now shall we attribute this omission to the inadvertency of the remarker? No, that cannot be supposed; for the sentence immediately followed. But they were nailing decisive words, which if they were fairly quoted, had put an end to the dispute, and left the remarker without the least room for evasion; and therefore he very honestly dropped them.

Our author says it is necessary to consult Bracton, in order to fix our idea of a *libel*. Now Bracton, throughout his five books *de legibus, et consuetudinibus angliæ*, only once happens to mention libels, very perfunctorily. He says, no more than, that a man may receive an injury by a *lampoon* and things of that nature. *Fit injuria cum de eo factum carmen famosum et hujusmodi.* Pray how

is any person's idea of a *libel* the better fixt by this description of it? Our author very sagaciously observes, on these words of Bracton, that the falsity of a libel is neither expressed nor implied by them. That it is not expressed is self-evident; but that it is not implied, we have only the remarker's *ipse dixit* for it.

But it was really idle and impertinent to draw this ancient lawyer into the dispute, as nothing could be learned from him, only that a libel is an injury, which every body will readily grant. I have good ground to suspect, that our author did not consult Bracton on this occasion; the passage cited in the remarks, is literally transcribed from Coke's ninth report, folio 60; by which an unlearned reader might be easily led to believe, that our author was well skilled in ancient learning: ridiculous affectation and pedantry this.

To follow the remarker through all his incoherencies and absurdities, would be irksome; and indeed nothing is more vexatious than to be obliged to refute lies and nonsense. Besides, a writer who is convicted of imposing wilful falsehoods on the reader, ought to be regarded with abhorrence and contempt. It is for this reason I have treated him with an acrimony of style, which nothing but his malice and want of sincerity, and not his ignorance, his dullness, or vanity, could have justified: however, as to the precedents and proceedings against libelling, before the case of the seven bishops, he ought to be left undisturbed in the full enjoyment of the honour he has justly acquired by transcribing them from common-place books, and publishing them in gazettes. Pretty speculations these to be inserted in newspapers, especially when they come clothed and loaded under the jargon and tackle of the law.

I am sure that by this time the reader must be heartily tired with the little I have offered on the subject, though I have endeavoured to speak so as to be understood; yet it in some measure appeared necessary to expose the folly and ignorance of this author, inasmuch as he seemed to be cherished by some pernicious insects of the profession, who neglecting the noblest parts feed on the rotten branches of the law.

Besides, the *liberty of the press* would be wholly abolished, if the remarker could have propagated the doctrine of punishing truth.—Yet he declares he would not be thought to derogate from that noble privilege of a free people. How does he reconcile those contradictions? why truly thus: he says, that the liberty of the press is a bulwark and two-edged weapon, capable of cutting two ways, and is only to be trusted in the hands of men of wit and address, and not with such fools as rail without art. I pass over the blunder of his calling a bulwark a two-edged weapon, for a lawyer is not supposed to be acquainted with military terms; but is it not highly ridiculous, that the gentleman will not allow a *squib* to be fired from the *bulwark of liberty*, yet freely gives permission to erect on it a battery of cannon.

Upon the whole, to suppress inquiries into the administration is good policy in an arbitrary government; but a free constitution and freedom of speech, have such a reciprocal dependence on each other, that they cannot subsist without consisting together.

On Government.—From the Pennsylvania Gazette, April 1, 1736.

GOVERNMENT is aptly compared to architecture; if the superstructure is too heavy for the foundation, the building totters, though assisted by outward props of art. But leaving it to every body to mould the similitude according to his particular fancy, I shall only observe, that the people have made the most considerable part of the legislature in every free state; which has been more or less so, in proportion to the share they have had in the administration of affairs. The English constitution is fixt on the strongest basis, we choose whomsoever we please for our representatives, and thus we have all the advantages of a democracy, without any of its inconveniences.

Popular governments have not been framed without the wisest reasons. It seemed highly fitting, that the conduct of magistrates created by and for the good of the whole should be made *liable to the inspection and animadversion* of the whole. Besides, there could not be a more potent counterpoise to the designs of ambitious men, than a multitude that hated and feared ambition. Moreover the power they possessed though great collectively, yet being distributed among a vast number, the share of each individual was too inconsiderable to lay him under any temptations of turning it to a wrong use. Again, a body of people thus circumstanced, cannot be supposed to judge amiss on any essential points; for if they decide in favour of themselves, which is extremely natural, their decision is just, inasmuch as whatever contributes to their benefit is a general benefit, and advances the real public good. Hence we have an easy solution of the *sophism*, so often proposed by the abettors of tyranny, who tell us, that when *differences arise between a prince and his subjects, the latter are incapable of being judges of the controversy, for that would be setting up judge and party in the same person.*

Some foreigners, have had a truer idea of our constitution. We read in the memoirs of the late archbishop of Cambray, Fenelon, the celebrated author of Telemachus, a conversation which he had with the *pretender*,

(son of James II. of England.) "If ever you come to the crown of England," says the bishop, "you will be a happy prince; with an unlimited power to do good, and only restrained from doing evil." A blunt Briton, perhaps, would have said in plain English, "You'll be at liberty to do as much good as you please, but by G— you shall do us no hurt." The bishop sweetened the pill; for such it would appear in its simple form, to a mind fraught with notions of arbitrary power, and educated among a people, who, with the utmost simplicity, boast of their slavery.

What can be more ridiculous than to hear them frequently object to the English gentlemen that travel in their country.* What is your king? Commend me to our grand monarch, who can do whatever he pleases. But begging pardon of these facetious gentlemen, whom it is not my intention to disturb in their many notions of government, I shall go on to examine what were the sentiments of the ancient Romans on this head.

We find that their dictator, a magistrate never created but in cases of great extremity, vested with power as absolute during his office (which never exceeded six months) as the greatest kings were never possessed of; this great ruler was liable to be called to an account† by any of the tribunes of the people, whose persons were at the same time rendered sacred, by the most solemn laws.

This is evident proof, that the Romans were of opinion, that the *people could not in any sense divest themselves of the supreme authority*, by conferring the most extensive power they possibly could imagine, on one or more persons acting as magistrates.

This appears still more evident, in remarking‡ that the people sat as umpire of the differences which had arisen between the dictator and senate, in the case of young *Fabius*.

The great deference which *Cicero* paid to the judgment of the Roman people, appears by those inimitable orations, of which they were the sole judges and auditors. That great orator had a just opinion of their understanding. Nothing gave him a more sensible pleasure than their approbation. But the Roman populace was more learned than ours—more *virtuous* perhaps; but their sense of discernment was not better than ours. However, the judgment of a whole people, especially of a *free people*, is looked upon to be infallible, so that it is become a common proverb, that the voice of God is the voice of the people—*Vox Dei est populi vox*. And this is universally true, while they remain in their proper sphere, unbiassed by faction, undeluded by the tricks of designing men.

Thank God! we are in the full enjoyment of all these privileges. But can we be taught to prize them too much? or how can we prize them equal to their value, if we do not know their intrinsic worth, and that they are *not* a gift bestowed upon us by other men, but *a right that belongs to us by the laws of God and nature?*

Since they are our right, let us be vigilant to preserve them uninfringed, and free from encroachments; if animosities arise, and that we should be obliged to resort to party; let each of us range himself on the side which unfurls the ensigns of *public good*. Faction will then vanish, which if not timely suppressed, may overturn the balance, the palladium of liberty, and crush us under its ruins.

The design of this paper, is to assert the *common rights of mankind*, by endeavouring to illustrate eternal truths, that cannot be shaken even with the foundations of the world.

I may take another opportunity to show, how a government founded on these principles rises into the most beautiful structure, with all the graces of symmetry and proportion, as much different from that raised on arbitrary power, as Roman architecture from a gothic building.

On Government.—From the Pennsylvania Gazette, April 8, 1736.

An ancient sage of the law,* says,—the king can do no wrong; for if he doeth wrong he is not the king.† And in another place,—when the king doth justice he is God's vicar, but when he doth unjustly he is the agent of the devil.‡ The politeness of the latter times, has given a softer turn to the expression. It is now said, *the king can do no wrong, but his ministers may.* In allusion to this the parliament of 1741, declared they made war against the king for the king's service. But his majesty affirmed that such a distinction was absurd, though by the way his own creed contained a greater absurdity, for he believed he had an authority from God to oppress the subjects, whom by the same authority he was obliged to cherish and defend. Aristotle calls all princes tyrants, from the moment they set up an interest different from that of their subjects; and this is the only definition he gives us of tyranny. Our own countryman, before cited, and the sagacious Greek, both agree on this point, that a governor who acts contrary to the ends of government, loses the title bestowed on him at his institution. It would

* Qu'est ce qui votre roi? parles moi de notre grand monarque, morblieu! qui peut faire tout ce qu'il veut.

† Si antiquus duimus plebi Romanæ esset, (says one of the tribunes.) Se audacter laturum de abrogando. Q. Fabii, Dictatoris Imperio, T. Liv. lib. 22. chap. 25.

‡ Tribunes plebis appello, (says an illustrious senator to the dictator) provoco ad populum, eumque tibi fugienti senatus judicium, judicem fero. lib 8. chap. 33.

* *Bracton* de leg. Angl. An author of great weight, contemporary with Henry III.

† Rex non facit injuriam, qui si facit injuriam, non est rex.

‡ Dum facit justitiam vicarius est regis æterni minister autere diaboli dum declinet ad injuriam

be highly improper to give the same name to things of different qualities, or that produce different effects; matter, while it communicates heat, is generally called *fire*, but when the flames are extinguished, the appellation is changed. Sometimes indeed the same sound serves to express things of a contrary nature; but that only denotes a defect, or poverty in the language.

A wicked prince imagines that the crown receives a new lustre from absolute power, whereas every step he takes to obtain it, is a forfeiture of the crown.

His conduct is as foolish as it is detestable; he aims at glory and power, and treads the path that leads to dishonour and contempt; he is a plague to his country, and deceives himself.

During the inglorious reigns of the Stuarts (except a part of queen Anne's) it was a perpetual struggle between them and the people; those endeavouring to subvert, and these bravely opposing the subverters of liberty. What were the consequences? One lost his life on a scaffold, another was banished. The memory of all of them stinks in the nostrils of every true lover of his country; and their history stains with indelible blots the English annals.

The reign of queen Elizabeth furnishes a beautiful contrast. All her views centred in one object, which was the public good. She made it her study to gain the love of her subjects, not by flattery or little soothing arts, but by rendering them substantial favours. It was far from her policy to encroach on their privileges; she augmented and secured them.

And it is remarked to her eternal honour, that the acts presented to her for her royal approbation (forty or fifty of a session of parliament) were signed without any examining farther than the titles. This wise and good queen only reigned for her people, and knew that it was absurd to imagine they would promote any thing contrary to their own interests, which she so studiously endeavoured to advance. On the other hand, when this queen asked money of the parliament, they frequently gave her more than she demanded, and never inquired how it was disposed of, except for form sake, being fully convinced she would not employ it but for the general welfare. Happy princess, happy people! what harmony, what mutual confidence! Seconded by the hearts and purses of her subjects, she crushed the exorbitant power of Spain, which threatened destruction to England, and chains to all Europe. That monarchy has ever since pined under the stroke, so that now when we send a man of war or two to the West Indies, it puts her into such a panic fright, that if the galleons can steal home, she sings *Te Deum* as for a victory.

This is a true picture of government, its reverse is *tyranny*.

On Paper Money.

*Remarks and Facts relative to the American Paper money.**

In the Report of the board of trade, dated February 9, 1764, the following reasons are given for *restraining the emission* of paper-bills of credit in America, as *a legal tender*.

1. "That it *carries the gold and silver out* of the province, and so ruins the country; as *experience has shown*, in every colony where it has been practised in any great degree.

2. "That the *merchants* trading to America *have suffered* and lost by it.

3. "That the restriction of it *has had a beneficial effect* in New England.

4. "That every *medium of trade should have an intrinsic value*, which paper-money has not. Gold and silver are therefore the fittest for this medium, as they are an equivalent; which paper never can be.

5. "That *debtors* in the assemblies make paper-money with *fraudulent views*.

6. "That in the middle colonies, where the credit of the paper-money has been best supported, the bills have *never kept to their nominal value* in circulation; but have constantly depreciated to a certain degree, whenever the quantity has been increased."

To consider these reasons in their order; the first is,

1. "*That paper-money* carries the gold and silver out *of the province, and so ruins the country; as* experience has shown, *in every colony where it has been practised in any great degree.*"—The opinion, of its ruining the country, seems to be merely speculative, or not otherwise founded than upon misinformation in the matter of fact. The truth is, that the balance of their trade with Britain being greatly against them, the gold and silver are drawn out to pay that balance; and then the necessity of some medium of trade has induced the making of paper-money, which could *not* be carried away. Thus, if carrying out all the gold and silver ruins a country, every colony was ruined before it made paper-money.—But, far from being ruined by it, the

* The occasion of the Report, to which this paper is a reply, was as follows. During the war there had been a considerable and an unusual trade to America, in consequence of the great fleets and armies on foot there, and the clandestine dealings with the enemy, who were cut off from their own supplies. This made great debts. The briskness of the trade ceasing with the war, the merchants were anxious for payment, which occasioned some confusion in the colonies, and stirred up a clamour in England against paper-money. The board of trade, of which lord Hillsborough was the chief, joined in this opposition to paper-money, as appears by the report. Dr. Franklin being asked to draw up an answer to the report, wrote the paper given here; adapted to the then condition of the colonies; in relation to which the principles are sound; but in relation to Great Britain no more is said than what is accordant with universal experience. When paper was over-issued in lieu of money, bankruptcies followed, and the British creditors suffered accordingly; as they have since suffered through similar causes.

colonies that have made use of paper-money have been, and are all in a thriving condition. The debt indeed to Britain has increased, because their numbers, and of course their trade, have increased; for all trade having always a proportion of debt outstanding, which is paid in its turn, while fresh debt is contracted, the proportion of debt naturally increases as the trade increases; but the improvement and increase of estates in the colonies have been in a greater proportion than their debt. New England, particularly in 1696 (about the time they began the use of paper-money) had in all its four provinces but 130 churches or congregations; in 1760 they were 530. The number of farms and buildings there is increased in proportion to the numbers of people; and the goods exported to them from England in 1750, before the restraint took place, were near five times as much as before they had paper-money. Pennsylvania, before it made any paper-money, was totally stript of its gold and silver; though they had from time to time, like the neighbouring colonies, agreed to take gold and silver coins at higher nominal values, in hopes of drawing money into, and retaining it, for the internal uses of the province. During that weak practice, silver got up by degrees to 8*s.* 9*d.* per ounce, and English crowns were called six, seven, and eight shilling pieces, long before paper-money was made. But this practice of increasing the denomination was found not to answer the end. The balance of trade carried out the gold and silver as fast as they were brought in; the merchants raising the price of their goods in proportion to the increased denomination of the money. The difficulties for want of cash were accordingly very great, the chief part of the trade being carried on by the extremely inconvenient method of barter; when in 1723 paper-money was first made there, which gave new life to business, promoted greatly the settlement of new lands (by lending small sums to beginners on easy interest, to be repaid by instalments) whereby the province has so greatly increased in inhabitants, that the export from hence thither is now more than tenfold what it then was; and by their trade with foreign colonies, they have been able to obtain great quantities of gold and silver to remit hither in return for the manufactures of this country. New York and New Jersey have also increased greatly during the same period, with the use of paper-money; so that it does not appear to be of the ruinous nature ascribed to it. And if the inhabitants of those countries are glad to have the use of paper among themselves, that they may thereby be enabled to spare, for remittances hither, the gold and silver they obtain by their commerce with foreigners; one would expect, that no objection against their parting with it could arise here, in the country that receives it.

The 2d reason is, "*That the* merchants *trading to America have* suffered *and lost by the paper-money.*"—This may have been the case in particular instances, at particular times and places: as in South Carolina, about 58 years since; when the colony was thought in danger of being destroyed by the Indians and Spaniards; and the British merchants, in fear of losing their whole effects there, called precipitately for remittances; and the inhabitants, to get something lodged in safe countries, gave any price in paper-money for bills of exchange; whereby the paper, as compared with bills, or with produce, or other effects fit for exportation, was suddenly and greatly depreciated. The unsettled state of government for a long time in that province had also its share in depreciating its bills. But since that danger blew over, and the colony has been in the hands of the crown; their currency became fixed, and has so remained to this day. Also in New England, when much greater quantities were issued than were necessary for a medium of trade, to defray the expedition against Louisbourg; and, during the last war in Virginia and North Carolina, when great sums were issued to pay the colony troops, and the war made tobacco a poorer remittance, from the higher price of freight and insurance: in these cases, the merchants trading to those colonies may sometimes have suffered by the sudden and unforeseen rise of exchange. By slow and gradual rises, they seldom suffer; the goods being sold at proportionable prices. But war is a common calamity in all countries, and the merchants that deal with them cannot expect to avoid a share of the losses it sometimes occasions, by affecting public credit. It is hoped, however, that the profits of their subsequent commerce with those colonies may have made them some reparation. And the merchants trading to the middle colonies (New York, New Jersey, and Pennsylvania) have never suffered by any rise of exchange; it having ever been a constant rule there, to consider British debts as payable in Britain, and not to be discharged but by as much paper (whatever might be the rate of exchange) as would purchase a bill for the full sterling sum. On the contrary, the merchants have been great gainers by the use of paper-money in those colonies; as it enabled them to send much greater quantities of goods, and the purchasers to pay more punctually for them. And the people there make no complaint of any injury done them by paper-money with a legal tender; they are sensible of its benefits; and petition to have it so allowed.

The 3d reason is, "*That the* restriction *has had a* beneficial effect *in New England.*"

Particular circumstances in the New England colonies made paper-money less necessary and less convenient to them. They have great and valuable fisheries of whale and cod, by which large remittances can be made. They are four distinct governments; but having much mutual intercourse of dealings, the money of each used to pass current in all: but the whole of this common currency not being under one common direction, was not so easily kept within due bounds: the prudent reserve of one colony in its emissions being rendered useless by excess in another. The Massachusetts, therefore, were not dissatisfied with the restraint, as it restrained their neighbours as well as themselves; and perhaps *they* do not desire to have the act repealed. They have not yet felt much inconvenience from it; as they were enabled to abolish their paper-currency, by a large sum in silver from Britain to reimburse their expenses in taking Louisbourg, which, with the gold brought from Portugal, by means of their fish, kept them supplied with a currency; till the late war furnished them and all America with bills of exchange; so that little cash was needed for remittance. Their fisheries too furnish them with remittance through Spain and Portugal to England; which enables them the more easily to retain gold and silver in their country. The middle colonies have not this advantage; nor have they tobacco; which in Virginia and Maryland answers the same purpose. When colonies are so different in their circumstances, a regulation, that is not inconvenient to one or a few, may be very much so to the rest. But the pay is now become so indifferent in New England, at least in some of its provinces, through the want of currency, that the trade thither is at present under great discouragement.

The 4th reason is, "*That every* medium of trade *should have an* intrinsic value; *which paper-money has not. Gold and silver are therefore the fittest for this medium, as they are an equivalent; which paper never can be.*" However fit a particular thing may be for a particular purpose; wherever that thing is not to be had, or not to be had in sufficient quantity; it becomes necessary to use something else, the fittest that can be got, in lieu of it. Gold and silver are not the produce of North America, which has no mines; and that which is brought thither cannot be kept there in sufficient quantity for a currency. Britain, an independent great state, when its inhabitants grow too fond of the expensive luxuries of foreign countries, that draw away its money, can, and frequently does, make laws to discourage or prohibit such importations; and by that means can retain its cash. The *colonies* are dependent governments; and their people having naturally great respect for the sovereign country, and being thence immoderately fond of its modes, manufactures, and superfluities, cannot be restrained from purchasing them by any province law; because such law, if made, would immediately be repealed here, as prejudicial to the trade and interest of Britain. It seems hard therefore, to draw all their real money from them, and then refuse them the poor privilege of using paper instead of it. Bank bills and bankers' notes are daily used *here* as a medium of trade, and in large dealings perhaps the greater part is transacted by their means; and yet *they* have no intrinsic value, but rest on the credit of those that issue them; as paper-bills in the colonies do on the credit of the respective governments there. Their being payable in cash upon sight by the drawer is indeed a circumstance that cannot attend the colony bills, for the reason just abovementioned; their cash being drawn from them by the British trade: but the legal tender being substituted in its place, is rather a greater advantage to the possessor; since he need not be at the trouble of going to a *particular bank* or banker to demand the money, finding (wherever he has occasion to lay out money in the province) a person that is obliged to take the bills. So that even out of the province, the knowledge, that every man within that province is obliged to take its money, gives the bills credit among its neighbours, nearly equal to what they have at home.

And were it not for the laws *here*, that restrain or prohibit as much as possible all losing trades, the cash of *this* country would soon be exported: every merchant, who had occasion to remit it, would run to the bank with all its bills, that came into his hands, and take out his part of its treasure for that purpose; so that in a short time, it would be no more able to pay bills in money upon sight, than it is now in the power of a colony treasury so to do. And if government afterwards should have occasion for the credit of the bank, it must of necessity make its bills a legal tender; funding them however on taxes which they may in time be paid off; as has been the general practice in the colonies.—At this very time, even the silver-money in England is obliged to the legal tender for part of its value; that part which is the difference between its real weight and its denomination. Great part of the shillings and sixpences now current are, by wearing become five, ten, twenty, and some of the sixpences even fifty per cent. too light. For this difference between the *real* and the *nominal*, you have no *intrinsic* value; you have not so much as paper, you have nothing. It is the legal tender, with the knowledge that it can easily be repassed for the same value, that makes threepennyworth of silver pass for sixpence. Gold and silver have undoubtedly *some* properties that give them a fitness above paper, as a

medium of exchange: particularly their *universal estimation;* especially in cases where a country has occasion to carry its money abroad, either as a stock to trade with, or to purchase *allies* and *foreign succours*. Otherwise, that very universal estimation is an inconvenience, which paper-money is free from; since it tends to deprive a country of even the quantity of currency that should be retained as a necessary instrument of its internal commerce, and obliges it to be continually on its guard in making and executing, at a great expense, the laws that are to prevent the trade which exports it.—Paper-money well funded has another great advantage over gold and silver; its lightness of carriage, and the little room that is occupied by a great sum; whereby it is capable of being more easily, and more safely, because more privately, conveyed from place to place. Gold and silver are not *intrinsically* of equal value with iron, a metal in itself capable of many more beneficial uses to mankind. Their value rests chiefly in the estimation they happen to be in among the generality of nations, and the credit given to the opinion, that that estimation will continue. Otherwise a pound of gold would not be a real equivalent for even a bushel of wheat. Any other well-founded credit, is as much an equivalent as gold and silver; and in some cases more so, or it would not be preferred by commercial people in different countries. Not to mention again our own bank bills; Holland, which understands the value of cash as well as any people in the world, would never part with gold and silver for credit (as they do when they put it into their bank, from whence little of it is ever afterwards drawn out) if they did not think and find the credit a full equivalent.

The fifth reason is, "*That* debtors *in the assemblies make paper-money* with fraudulent views." This is often said by the adversaries of paper-money, and if it has been the case in any particular colony, that colony should, on proof of the fact, be duly punished. This, however, would be no reason for punishing other colonies, who have *not* so abused their legislative powers. To deprive all the colonies of the convenience of paper-money, because it has been charged on some of them, that they have made it an instrument of fraud, as if all the India, bank, and other stocks and trading companies were to be abolished, because there have been, once in an age, Mississippi and South-sea schemes and bubbles.

The sixth and last reason is, "*That in the middle colonies, where the paper-money has been best supported, the bills have* never kept to their nominal value *in circulation; but have constantly depreciated to a certain degree, whenever the quantity has been increased.*" If the rising of the value of any particular commodity wanted for exportation, is to be considered as a depreciation of the values of *whatever remains* in the country; then the rising of silver above paper to that height of additional value, which its capability of exportation only gave it, may be called a depreciation of the paper. Even here, as bullion has been wanted or not wanted for exportation, its price has varied from 5*s.* 2*d.* to 5*s.* 8*d.* per ounce. This is near 10 per cent. But was it ever said or thought on such an occasion, that all the bank bills, and all the coined silver, and all the gold in the kingdom, were depreciated 10 per cent? Coined silver is now wanted here for change, and 1 per cent. is given for it by some bankers: are gold and bank notes therefore depreciated 1 per cent.? The fact in the middle colonies is really this: on the emission of the first paper-money, a difference soon arose between that and silver; the latter having a property the former had not, a property always in demand in the colonies; to wit, its being fit for a remittance. This property having soon found its value, by the merchants bidding on one another for it, and a dollar thereby coming to be rated at 8*s.* in paper-money of New York, and 7*s.* 6*d.* in paper of Pennsylvania, it has continued uniformly at those rates in both provinces now near forty years, without any variation upon new emissions; though, in Pennsylvania, the paper-currency has at times increased from 15,000*l.* the first sum, to 600,000*l.* or near it. Nor has any alteration been occasioned by the paper-money, in the price of the necessaries of life, when compared with silver: they have been for the greatest part of the time no higher than before it was emitted; varying only by plenty and scarcity, or by a less or greater foreign demand. It has indeed been usual with the adversaries of a paper-currency, to call every rise of exchange with London, a depreciation of the paper: but this notion appears to be by no means just: for if the paper purchases every thing but bills of exchange, at the former rate, and these bills are not above one tenth of what is employed in purchases; then it may be more properly and truly said, that the exchange has risen, than that the paper has depreciated. And as a proof of this, it is a certain fact, that whenever in those colonies bills of exchange have been dearer, the purchaser has been constantly obliged to give more in silver, as well as in paper, for them; the silver having gone hand in hand with the paper at the rate above-mentioned; and therefore it might as well have been said, that the silver was depreciated.

There have been several different schemes for furnishing the colonies with paper-money, that should *not* be a legal tender, viz.

1. *To form a bank, in imitation of the bank of England, with a sufficient stock of cash* to pay the bills on sight.

This has been often proposed, but appears

impracticable, under the present circumstances of the colony-trade; which, as is said above, draws all the cash to Britain, and would soon strip the bank.

2. *To raise a fund by some yearly tax, securely lodged in the bank of England as it arises, which should* (during the term of years *for which the paper-bills are to be current*) *accumulate to a sum sufficient to discharge them all at their* original value.

This has been tried in Maryland: and the bills so funded were issued without being made a general legal tender. The event was, that as notes payable in time are naturally subject to a discount proportioned to the time; so these bills fell at the beginning of the term so low, as that twenty pounds of them became worth no more than twelve pounds in Pennsylvania, the next neighbouring province; though both had been struck near the same time at the same nominal value, but the latter was supported by the general legal tender. The Maryland bills, however, began to rise as the term shortened, and towards the end recovered their full value. But, as a depreciating currency injures creditors, *this* injured debtors; and by its continually changing value, appears unfit for the purpose of money, which should be as fixed as possible in its own value; because it is to be the measure of the value of other things.

3. *To make the bills* carry an interest *sufficient to support their value.*

This too has been tried in some of the New England colonies; but great inconveniences were found to attend it. The bills, to fit them for a currency, are made of various denominations, and some very low, for the sake of change; there are of them from 10*l.* down to 3*d.* When they first come abroad, they pass easily, and answer the purpose well enough for a few months; but as soon as the interest becomes worth computing, the calculation of it on every little bill in a sum between the dealer and his customers, in shops, warehouses, and markets, takes up much time, to the great hinderance of business. This evil, however, soon gave place to a worse; for the bills were in a short time gathered up and hoarded; it being a very tempting advantage to have money bearing interest, and the principle all the while in a man's power, ready for bargains that may offer; which money out on mortgage is not. By this means numbers of people became usurers with small sums, who could not have found persons to take such sums of them upon interest, giving good security; and would therefore not have thought of it; but would rather have employed the money in some business, if it had been money of the common kind. Thus trade, instead of being increased by such bills, is diminished; and by their being shut up in chests, the very end of making them (viz. to furnish a medium of commerce) is in a great measure, if not totally defeated.

On the whole, no method has hitherto been formed to establish a medium of trade, in lieu of money, equal in all its advantages, to bills of credit—funded on sufficient taxes for discharging it, or on land-security of double the value, for repaying it at the end of the term; and in the mean time, made a GENERAL LEGAL TENDER.

On Coin.

THE clamour made of the great inconveniences, suffered by the community in regard to the coin of this kingdom, prompted me in the beginning of his majesty's reign to give the public some reflections on coin in general; on gold and silver as merchandise: and I added my thoughts on paper passing as money.

As I trust the principles then laid down are founded in truth, and will serve now as well as then, though made fourteen years ago, to change any calculation, would be of little use.

Some sections, in the foregoing essay of principles of trade, might in this appendix, appear like a repetition, have been omitted.

I always resolved not to enter into any particular deduction from laws relating to coin; or into any minutia, as to accurate nicety, in weights. My intention was, and still is, no more than to endeavour to show, as briefly as possible; that what relates to coin, is not of such a complex, abstruse nature as it is generally made: and that no more than common justice with common sense are required, in all regulations concerning it.

Perhaps more weighty concerns may have prevented government doing more in regard to coin, than ordering quarter guineas to be made; which till this reign had not been done.

But as I now judge by the late acts relating to gold coin, that the legislature is roused: possibly they may consider still more of that, as well as of silver coin.

Should these reflections prove of any public utility, my end will be answered.

1. Coins are pieces of metal, on which an impression is struck; which impression is understood by the legislature to ascertain the weight, and the intrinsic value, or worth of each piece.

2. The real value of coins depends not on a piece being called a guinea, a crown, or a shilling; but the true worth of any particular piece of gold, or silver, is what such piece contains of fine or pure gold or silver.

3. Silver and copper being mixed with gold, and copper with silver, are generally understood, to render those metals more

durable when circulating in coins: yet air and moisture evidently affect copper, whether by itself or mixed with other metal; whereas pure gold or silver are much less affected or corroded thereby.

4. The quantity of silver and copper so mixed by way of alloy, is fixed by the legislature. When melted with pure metal, or added, or extracted to make a lawful proportion, both gold and silver are brought to what is called standard. This alloy of silver and copper is never reckoned of any value. The standard once fixed, should ever be invariable; since any alteration would be followed by great confusion, and detriment to the state.

5. It is for public convenience, and for facilitating the bartering between mankind for their respective wants, that coins were invented and made; for were there no coins, gold and silver might be made, or left pure; and what we now call a guinea's worth of any thing, might be cut off from gold, and a crown's worth from silver, and might serve, though not so commodiously as coin.

6. Hence it is evident that in whatever shape, form, or quality, these metals are, they are brought to be the most common measure between man and man, as serving to barter against, or exchange for, all kinds of commodities; and consequently are no more than an universal accepted merchandise: for gold and silver in bullion, that is to say in an uncoined mass, and gold or silver in coin, being of equal weight, purity, and fineness, must be of equal value, the one to the other: for the stamp on either of these metals, duly proportioned, neither adds to, nor takes from their intrinsic value?

7. The prices of gold and silver as merchandise, must in all countries, like other commodities, fluctuate and vary according to the demand; and no detriment can arise therefrom, more than from the rise and fall of any other merchandise. But if when coined, a due proportion of these metals, the one to the other, be not established, the disproportion will be felt and proved; and that metal wherein the excess in the proportion is allowed, will preferably be made use of, either in exportation, or in manufacture; as is the case now, in this kingdom, in regard to silver coin, and which, in some measure, is the occasion of its scarcity.

For so long as 15 ounces and about one fifth of pure silver in Great Britain, are ordained, and deemed, to be equal to 1 ounce of pure gold, whilst in neighbouring states, as France and Holland, the proportion is fixed only 14 and a half ounces of pure silver, to one ounce of pure gold; it is very evident, that our silver when coined, will always be the most acceptable merchandise, by near five in the hundred, and consequently more liable to be taken away, or melted down, than before it received the impression at the mint.

8. 62 shillings only, are ordained by law to be coined from 12 ounces of standard silver: now following the proportion above mentioned of 15 one fifth to 14 one half, no regard being necessary as to alloy, 65 shillings should be the quantity cut out of those 12 ounces.

9. No everlasting invariable fixation for coining, can be made from a medium of the market price of gold and silver, though that medium might with ease be ascertained so as to hinder, either coined gold or silver from becoming a merchandise: for whenever the price shall rise above that medium, so as to give a profit; whatever is coined will be made a merchandise. This in the nature of things, must come from the general exchangings, circulation, and fluctuation in trade, and cannot be hindered; but assuredly the false proportions may be amended by the legislature, and settled as the proportion between gold and silver is in other nations; so as not to make, as now is the case, our coined silver a merchandise, so much to be preferred to the same silver uncoined.

10. What has been said seems to be self-evident; but the following calculations made on the present current price of silver and gold, may serve to prove beyond all doubt, that the proportion now fixed between gold and silver should be altered and fixed as in other countries.

By law, 62 shillings are to be coined out of one pound, or 12 ounces of standard silver. This is 62 pence an ounce. Melt these 62 shillings, and in a bar, this pound weight at market will fetch 68 pence an ounce, or 68 shillings the pound. The difference therefore between coined and uncoined silver in Great Britain is now nine and two thirds per cent.

Out of a pound or 12 ounces of standard gold, 44 guineas and ½ are ordained to be coined. This is 3*l.* 17*s.* 10½*d.* an ounce. Now the current market price of standard gold is 3*l.* 19*s.* an ounce, which makes not quite 1½ per cent. difference between the coined and uncoined gold.

The state, out of duties imposed, pays for the charge of coining, as indeed it ought: for it is for public convenience, as already said, that coins are made. It is the current market price of gold and silver, that must govern the carrying it to the mint. It is absurd to think any one should send gold to be coined that should cost more than 3*l.* 17*s.* 10½*d.* an ounce, or silver more than 62 pence the ounce: and, as absurd would it be, to pretend, that those prices *only* shall be the constant invariable prices. It is contended that there is not a proper proportion fixed in the value of one metal to another, and this requires alteration.

11. It may be urged, that should the legislature fix the proportion of silver to gold as in other countries, by ordering 65 shillings instead of 62 to be cut out of a pound of stand-

ard silver; yet still there would be 4⅓ per cent. difference between coined and uncoined silver; whereas there is but about 1½ per cent. difference in gold.

On this we shall observe that the course of trade, not to mention extraordinary accidents, will make one metal more in request at one time than another; and the legislature in no one particular country, can bias, or prescribe rules or laws to influence, such demand; which ever must depend on the great chain of things, in which all the operations of this world are linked. Freedom and security only are wanted in trade: nor does coin require more, if a just proportion in the metals be settled.

12. To return to gold: it is matter of surprise, that the division of the piece called a guinea, has not been made smaller than just one half, as it now is; that is into quarters, thirds, and two thirds. Hereby the want of silver coin might be greatly provided for; and those pieces, together with the light silver coin, which can *only now* remain with us, would sufficiently serve the uses in circulation.

In Portugal, where almost all their coin is gold, there are divisions of the moedas, or 27 shilling pieces, into tenths, sixths, quarters, thirds, halves, and two thirds. Of the moeda and one third, or 36 shilling piece, into eights, quarters, and halves.

13. That to the lightness of the silver coin now remaining in Great Britain, we owe all the silver coin we now have, any person with weights and scales, may prove; as upwards of 70 shillings coined in the reign of king William, or dexterously counterfeited by false coiners, will scarce weigh 12 ounces, or a pound troy.

14. All the art of man can never hinder a constant exportation and importation of gold and silver, to make up for the different calls and balances that may happen in trade: for were silver to be coined as above, 65 shillings out of a pound troy weight of standard silver; if those 65 shillings would sell at a price that makes it worth while to melt or export them, they must and will be considered and used as merchandise: and the same will hold as to gold.

Though the proportion of about 14½ of pure silver, to one of pure gold, in neighbouring states be *now* fixed, in regard to their coin, and it is submitted such proportion should be attended to in this kingdom, yet that proportion may be subject to alteration: for this plain reason, that should the silver mines produce a quantity of that metal so as to make it greatly abound more in proportion than it now does, and the gold mines produce no more than now they do, more silver must be requisite to purchase gold.

15. That the welfare of any state depends on its keeping *all* its gold and silver, either in bullion or in coin, is a very narrow principle; all the republics we know of, wisely think otherwise. It is an utter impossibility; nor should it ever be aimed at; for gold and silver are as clearly a merchandise, as lead and tin; and consequently should have a perfect freedom and liberty,* coined and uncoined, to go and to come, pass and repass, from one country to another, in the general circulation and fluctuation of commerce, which will ever carry a general balance with it: for we should as soon give our lead, our tin, or any other product of our land or industry to those who want them, without an equivalent in some shape or other, as we should gold or silver; which it would be absurd to imagine can ever be done by our nation, or by any nation upon earth.

16. From Spain and Portugal come the greatest part of gold and silver: and the Spanish court very wisely permits the exportation of it on paying a duty, as in great Britain lead and tin do, when exported; whereas heretofore, and as it still continues in Portugal, penal laws were enacted against the sending it out of the country. Surely princes by enacting such laws, could not think they had it in their power to decree and establish that their subjects, or themselves, should not give an equivalent for what was furnished to them!

17. It is not our intention to descend into, or to discuss minutely, particular notions or systems, such as "*That silver, and not gold should be the standard money or coin.*"

"*That copper is an unfit material for money.*"

And "*That paper circulating as, and called artificial money is detrimental.*"

Yet as these doctrines seem to proceed from considering bullion, and money, or coin, in a different light from what we apprehend and have laid down, we will observe,

18. That it matters not whether silver or gold be called standard money; but it seems most rational, that the most scarce, and precious metal, should be the unit or standard.

19. That as to copper, it is as fit for money or a counter, as gold and silver; provided it be coined of a proper weight and fineness: and just so much will be useful, as will serve to make up small parts in exchanges between man and man.

20. That as to paper money, it is far from being detrimental; on the contrary, it is highly profitable, as its quick passing between man-

* As a general principle this is unquestionably true; but it must be general, or every nation with whom commerce is extensively carried on, must alike adopt it, or the principle immediately assumes an exceptionable character; and nations liable to be effected by it must provide means to counteract the effects of a sudden drain of the usual circulating medium, because the absence of a great quantity of the medium alters the price of exchange, of labour, goods, wages, rents, and the relative exchange of current money, subsistence; and depreciates all other property.

kind, instead of telling over, or weighing metal in coin, or bullion, is a gain of what is most precious in life, which is time. And there is nothing clearer than that those who must be concerned in counting and weighing, being at liberty to employ themselves on other purposes, are an addition of hands in the community.

The idea of the too great extension of credit, by the circulation of paper for money, is evidently as erroneous, as the doctrine of the non-exportation of gold and silver in bullion or coin: for were it not certain, that paper could command the equivalent of its agreed-for value; or that gold and silver in bullion or coin exported, would be returned in the course of trade in some other merchandise; neither paper would be used, or the metals exported. It is by means of the produce of the land, and the happy situation of this island, joined to the industry of its inhabitants, that those much adored metals, gold and silver, have been procured: and so long as the sea does not overflow the land, and industry continues, so long will those metals not be wanting. And paper in the general chain of credit and commerce, is as useful as they are: since the issuers or coiners of that paper are understood to have some equivalent to answer for what the paper is valued at: and no metal or coin can do more than find its value.

Moreover, as incontestable advantages of paper, we must add, that the charge of coining or making it, is by no means proportionate to that of coining of metals: nor is subject to waste by long use, or impaired by adulteration, sweating, or filing, as coins may.

Rules of Health.—From Poor Richard's Almanac, 1742.

Eat and drink such an exact quantity as the constitution of thy body allows of, in reference to the services of the mind.

They that study much, ought not to eat so much as those that work hard, their digestion being not so good.

The exact quantity and quality being found out, is to be kept to constantly.

Excess in all other things whatever, as well as in meat and drink, is also to be avoided.

Youth, age, and sick, require a different quantity.

And so do those of contrary complexions; for that which is too much for a phlegmatic man, is not sufficient for a choleric.

The measure of food ought to be (as much as possibly may be) exactly proportionable to the quality and condition of the stomach, because the stomach digests it.

That quantity that is sufficient, the stomach can perfectly concoct and digest, and it sufficeth the due nourishment of the body.

A greater quantity of some things may be eaten than of others, some being of lighter digestion than others.

The difficulty lies, in finding out an exact measure; but eat for necessity, not pleasure; for lust knows not where necessity ends.

Wouldst thou enjoy a long life, a healthy body, and a vigorous mind, and be acquainted also with the wonderful works of God, labour in the first place to bring thy appetite to reason.

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*Rules for a Club formerly established in Philadelphia.**

Previous question, to be answered at every meeting.

Have you read over these queries this morning, in order to consider what you might have to offer the Junto touching any one of them? viz.

1. Have you met with any thing, in the author you last read, remarkable, or suitable to be communicated to the Junto? particularly in history, morality, poetry, physic, travels, mechanic arts, or other parts of knowledge?

2. What new story have you lately heard agreeable for telling in conversation?

3. Hath any citizen in your knowledge failed in his business lately, and what have you heard of the cause?

4. Have you lately heard of any citizen's thriving well, and by what means?

5. Have you lately heard how any present rich man, here or elsewhere, got his estate?

6. Do you know of a fellow-citizen, who has lately done a worthy action, deserving praise and imitation: or who has lately committed an error, proper for us to be warned against and avoid?

7. What unhappy effects of intemperance have you lately observed or heard? of imprudence? of passion? or of any other vice or folly?

8. What happy effects of temperance? of prudence? of moderation? or of any other virtue?

9. Have you or any of your acquaintance been lately sick or wounded? If so, what remedies were used, and what were their effects?

10. Who do you know that are shortly going voyages or journies, if one should have occasion to send by them?

11. Do you think of any thing at present, in which the Junto may be serviceable to *mankind?* to their country, to their friends, or to themselves?

* This was an early performance. The club held in Philadelphia, was composed of men considerable for their influence and discretion, the chief measures of Pennsylvania usually received their first formation in this club, it existed thirty years without the nature of its institution being publicly known. This club gave origin to the American Philosophical Society now existing.

12. Hath any deserving stranger arrived in town since last meeting, that you heard of? and what have you heard or observed of his character or merits? and whether think you, it lies in the power of the Junto to oblige him, or encourage him as he deserves?

13. Do you know of any deserving young beginner lately set up, whom it lies in the power of the Junto any way to encourage?

14. Have you lately observed any defect in the laws of your *country*, of which it would be proper to move the legislature for an amendment? or do you know of any beneficial law that is wanting?

15. Have you lately observed any encroachment on the just liberties of the people?

16. Hath any body attacked your reputation lately? and what can the Junto do towards securing it?

17. Is there any man whose friendship you want, and which the Junto, or any of them, can procure for you?

18. Have you lately heard any member's character attacked, and how have you defended it?

19. Hath any man injured you, from whom it is in the power of the Junto to procure redress?

20. In what manner can the Junto or any of them, assist you in any of your honourable designs?

21. Have you any weighty affair in hand, in which you think the advice of the Junto may be of service?

22. What benefits have you lately received from any man not present?

23. Is there any difficulty in matters of opinion, of justice, and injustice, which you would gladly have discussed at this time?

24. Do you see any thing amiss in the present customs or proceedings of the Junto, which might be amended?

Any person to be qualified, to stand up, and lay his hand on his breast, and be asked these questions, viz.

1. Have you any particular disrespect to any present members?—*Answer.* I have not.

2. Do you sincerely declare, that you love mankind in general; of what profession or religion soever?—*Answer.* I do.

3. Do you think any person ought to be harmed in his body, name, or goods, for mere speculative opinions, or his external way of worship?—*Answer.* No.

4. Do you love truth for truth's sake, and will you endeavour impartially to find and receive it yourself and communicate it to others?—*Answer.* Yes.

Questions discussed by the Club.

Is *sound* an entity or body?

How may the phenomena of vapours be explained?

Is self-interest the rudder that steers mankind, the universal monarch to whom all are tributaries?

Which is the best form of government, and what was that form which first prevailed among mankind?

Can any one particular form of government suit all mankind?

What is the reason that the tides rise higher in the Bay of Fundy, than the Bay of Delaware?

Is the emission of paper-money safe?

What is the reason that men of the greatest knowledge are not the most happy?

How may the possessions of the Lakes be improved to our advantage?

Why are tumultuous, uneasy sensations, united with our desires?

Whether it ought to be the aim of philosophy to eradicate the passions?

How may smoky chimneys be best cured?

Why does the flame of a candle tend upwards in a spire?

Which is least criminal, a *bad* action joined with a *good* intention, or a *good* action with a *bad* intention?

Is it inconsistent with the principles of liberty in a free government, to punish a man as a libeller, when he speaks the truth?

Sketch of an English School, for the consideration of the Trustees of the Philadelphia Academy.

It is expected that every scholar, to be admitted into this school, be at least able to pronounce and divide the syllables in reading, and to write a legible hand. None to be received that are under — years of age.

First, or lowest Class.

Let the first class learn the English grammar rules, and at the same time let particular care be taken to improve them in orthography. Perhaps the latter is best done by pairing the scholars: two of those nearest equal in their spelling to be put together. Let these strive for victory; each propounding ten words every day to the other to be spelled. He that spells truly most of the other's words is victor for that day; he that is victor most days in a month, to obtain a prize, a pretty neat book of some kind, useful in their future studies. This method fixes the attention of children extremely to the orthography of words, and makes them good spellers very early. It is a shame for a man to be so ignorant of this little art, in his own language, as to be perpetually confounding words of like sound and different significations; the consciousness of which defect makes some men, otherwise of good learning and understanding, averse to writing even a common letter.

Let the pieces read by the scholars in this class be short; such as Croxall's fables, and

little stories. In giving the lesson, let it be read to them; let the meaning of the difficult words in it be explained to them: and let them con over by themselves before they are called to read to the master or usher, who is to take particular care, that they do not read too fast, and that they duly observe the stops and pauses. A vocabulary of the most usual difficult words might be formed for their use, with explanations; and they might daily get a few of those words and explanations by heart, which would a little exercise their memories; or at least they might write a number of them in a small book for the purpose, which would help to fix the meaning of those words in their minds, and at the same time furnish every one with a little dictionary for his future use.

The Second Class

To be taught reading with attention, and with proper modulations of the voice, according to the sentiment and the subject.

Some short pieces, not exceeding the length of a Spectator, to be given this class for lessons (and some of the easier Spectators would be suitable for the purpose). These lessons might be given every night as tasks; the scholars to study them against the morning. Let it then be required of them to give an account, first of the parts of speech, and construction of one or two sentences. This will oblige them to recur frequently to their grammar, and fix its principal rules in their memory. Next, of the intention of the writer, or the scope of the piece, the meaning of each sentence, and of every uncommon word. This would early acquaint them with the meaning and force of words, and give them that most necessary habit, of reading with attention.

The master then to read the piece with the proper modulations of voice, due emphasis, and suitable action, where action is required: and put the youth on imitating his manner.

Where the author has used an expression not the best, let it be pointed out; and let his beauties be particularly remarked to the youth.

Let the lessons for reading be varied, that the youth may be made acquainted with good styles of all kinds, in prose and verse, and the proper manner of reading each kind —sometimes a well told story, a piece of a sermon, a general's speech to his soldiers, a speech in a tragedy, some part of a comedy, an ode, a satire, a letter, blank verse, Hudibrastic, heroic, &c. But let such lessons be chosen for reading, as contain some useful instruction, whereby the understanding or morals of the youth may at the same time be improved.

It is required that they should first study and understand the lessons, before they are put upon reading them properly; to which end each boy should have an English dictionary, to help him over difficulties. When our boys read English to us, we are apt to imagine they understand what they read, because we do, and because it is their mother tongue. But they often read, as parrots speak, knowing little or nothing of the meaning. And it is impossible a reader should give the due modulation to his voice, and pronounce properly, unless his understanding goes before his tongue, and makes him master of the sentiment. Accustoming boys to read aloud what they do not first understand, is the cause of those even set tones so common among readers, which, when they have once got a habit of using, they find so difficult to correct: by which means, among fifty readers we scarcely find a good one. For want of good reading, pieces published with a view to influence the minds of men, for their own or the public benefit, lose half their force. Were there but one good reader in a neighbourhood, a public orator might be heard throughout a nation with the same advantages, and have the same effect upon his audience, as if they stood within the reach of his voice.

The Third Class

To be taught speaking proper and gracefully; which is near akin to good reading, and naturally follows it in the studies of youth. Let the scholars of this class begin with learning the elements of rhetoric from some short system, so as to be able to give an account of the most useful tropes and figures. Let all their bad habits of speaking, all offences against good grammar, all corrupt or foreign accents, and all improper phrases, be pointed out to him. Short speeches from the Roman, or other history, or from the legislative debates, might be got by heart, and delivered with the proper action, &c. Speeches and scenes in our best tragedies and comedies (avoiding every thing that could injure the morals of youth) might likewise be got by rote, and the boys exercised in delivering or acting them; great care being taken to form their manner after the truest models.

For their farther improvement, and a little, to vary their studies, let them now begin to read history, after having got by heart a short table of the principal epochas in chronology. They may begin with Rollin's Ancient and Roman histories, and proceed at proper hours, as they go through the subsequent classes, with the best histories of our own nation and colonies. Let emulation be excited among the boys, by giving, weekly, little prizes, or other small encouragements to those, who are able to give the best account of what they have read, as to time, places, names of persons, &c. This will make them read with attention, and imprint the history well on their memories. In remarking on the history, the master will have fine opportunities of instil-

ling instruction of various kinds, and improving the morals, as well as the understandings, of youth.

The natural and mechanic history, contained in the *Spectacle de la Nature*, might also be begun in this class, and continued through the subsequent classes, by other books of the same kind; for, next to the knowledge of duty, this kind of knowledge is certainly the most useful, as well as the most entertaining. The merchant may thereby be enabled better to understand many commodities in trade; the handicraftsman, to improve his business by new instruments, mixtures and materials; and frequently hints are given for new manufactures, or new methods of improving land, that may be set on foot greatly to the advantage of a country.

The Fourth Class

To be taught composition. Writing one's own language well, is the next necessary accomplishment after good speaking. It is the writing-master's business, to take care that the boys make fair characters, and place them straight and even in the lines: but to form their style, and even to take care that the stops and capitals are properly disposed, is the part of the English master. The boys should be taught to write letters to each other on any common occurrences, and on various subjects, imaginary business, &c. containing little stories, accounts of their late reading, what parts of authors please them, and why; letters of congratulation, of compliment, of request, of thanks, of recommendation, of admonition, of consolation, of expostulation, excuse, &c. In these, they should be taught to express themselves clearly, concisely, and naturally, without affected words or high-flown phrases. All their letters to pass through the master's hand, who is to point out the faults, advise the corrections, and commend what he finds right. Some of the best letters published in our own language, as sir William Temple's, those of Pope and his friends, and some others, might be set before the youth as models, their beauties pointed out and explained by the master, the letters themselves transcribed by the scholar.

Dr. Johnson's Ethices Elementa, or First Principles of Morality, may now be read by the scholar, and explained by the master, to lay a solid foundation of virtue and piety in their minds. And as this class continues the reading of history, let them now, at proper hours, receive some farther instruction in chronology, and in that part of geography (from the mathematical master) which is necessary to understand the maps and globes. They should also be acquainted with the modern names of the places they find mentioned in ancient writers. The exercises of good reading, and proper speaking, still continued at suitable times.

The Fifth Class.

To improve the youth in composition, they may now, besides continuing to write letters, begin to write little essays in prose, and sometimes in verse; not to make them poets, but for this reason, that nothing acquaints a lad so speedily with variety of expression, as the necessity of finding such words and phrases as will suit the measure, sound and rhyme of verse, and at the same time well express the sentiment. These essays should all pass under the master's eye, who will point out their faults, and put the writer on correcting them. Where the judgment is not ripe enough for forming new essays, let the sentiments of a Spectator be given, and required to be clothed in the scholar's own words; or the circumstances of some good story, the scholar to find expression. Let them be put sometimes on abridging a paragraph of a diffuse author: sometimes on dilating or amplifying what is wrote more closely. And now let Dr. Johnson's Noetica, or First Principles of Human Knowledge, containing a logic, or art of reasoning, &c. be read by the youth, and the difficulties, that may occur to them, be explained by the master. The reading of history, and the exercises of good reading and just speaking still continued.

The Sixth Class.

In this class, besides continuing the studies of the preceding in history, rhetoric, logic, moral and natural philosophy, the best English authors may be read and explained; as Tillotson, Milton, Locke, Addison, Pope, Swift, the higher papers in the Spectator and Guardian, the best translations of Homer, Virgil, and Horace, of Telemachus, Travels of Cyrus, &c.

Once a year, let there be public exercises in the hall; the trustees and citizens present. Then let fine bound books be given as prizes to such boys, as distinguish themselves, and excel the others in any branch of learning, making three degrees of comparison: giving the best prize to him, that performs best; a less valuable one to him, that comes up next to the best, and another to the third. Commendations, encouragement, and advice to the rest; keeping up their hopes, that, by industry, they may excel another time. The names of those, that obtain the prize, to be yearly printed in a list.

The hours of each day are to be divided and disposed in such a manner, as that some classes may be with the writing-master, improving their hands; others with the mathematical master, learning arithmetic, accounts, geography, use of the globes, drawing, mechanics, &c. while the rest are in the English school, under the English master's care.

Thus instructed, youth will come out of this school fitted for learning any business, calling, or profession, except such wherein languages are required: and, though unac-

quainted with any ancient or foreign tongue, they will be masters of their own, which is of more immediate and general use, and withal will have attained many other valuable accomplishments: the time usually spent in acquiring those languages, often without success, being here employed in laying such a foundation of knowledge and ability, as, properly improved, may qualify them to pass through and execute the several offices of civil life, with advantage and reputation to themselves and country.

On Discoveries.—From the Pennsylvania Gazette, No. 409, Oct. 14, 1736.

The world but a few ages since, was in a very poor condition, as to trade and navigation, nor indeed, were they much better in other matters of useful knowledge. It was a green headed time, every useful improvement was hid from them, they had neither looked into heaven, nor earth, into the sea, nor land, as has been done since. They had philosophy without experiments, mathematics without instruments, geometry without scale, astronomy without demonstration.

They made war without powder, shot, cannon, or mortars; nay, the mob made their bonfires without squibs, or crackers. They went to sea without compass, and sailed without the needle. They viewed the stars, without telescopes, and measured latitudes without observation. . Learning had no printing-press, writing no paper, and paper no ink; the lover was forced to send his mistress a deal board for a love-letter, and a billet doux might be the size of an ordinary trencher.—They were clothed without manufacture, and their richest robes were the skins of the most formidable monsters; they carried on trade without books, and correspondence without posts; their merchants kept no accounts, their shop-keepers no cash-books, they had surgery without anatomy, and physicians without the *materia medica*, they gave emetics without ipecacuanha, drew blisters without cantharides, and cured agues without the bark.

As for geographical discoveries, they had neither seen the North Cape, nor the Cape of Good Hope south. All the discovered inhabited world, which they knew and conversed with, was circumscribed within very narrow limits, viz. France, Britain, Spain, Italy, Germany, and Greece; the Lesser Asia, the west part of Persia, Arabia, the north parts of Africa, and the islands of the Mediterranean sea, and this was the whole world to them; not that even these countries were fully known neither, and several parts of them not inquired into at all. Germany was known little farther than the banks of the Elbe; Poland as little beyond the Vistula, or Hungary a little beyond the Danube; Muscovy or Russia, perfectly unknown as much as China, beyond it, and India only by a little commerce upon the coast, about Surat and Malabar; Africa had been more unknown, but by the ruin of the Carthaginians, all the western coast of it was sunk out of knowledge again, and forgotten; the northern coast of Africa, in the Mediterranean, remained known, and that was all, for the Saracens overrunning the nations which were planted there, ruined commerce, as well as religion; the Baltic Sea was not discovered, nor even the navigation of it known; for the Teutonic knights came not thither till the 13th century.

America was not heard of, nor so much as a suggestion in the minds of men, that any part of the world lay that way. The coasts of Greenland, or Spitsbergen, and the whale fishing, not known; the best navigators in the world, at that time, would have fled from a whale, with much more fright and horror, than from the devil, in the most terrible shapes they had been told he appeared in.

The coasts of Angola, Congo, the Gold and the Grain coasts, on the west side of Africa, from whence, since that time, such immense wealth has been drawn, not discovered, nor the least inquiry made after them. All the East India and China trade, not only undiscovered, but out of the reach of expectation! Coffee and tea, (those modern blessings of mankind) had never been heard of: all the unbounded ocean, we now call the South Sea, was hid, and unknown: all the Atlantic Ocean, beyond the mouth of the Streights, was frightful and terrible in the distant prospect, nor durst any one peep into it, otherwise than as they might creep along the coast of Africa, towards Sallee, or Santa Cruz. The North Seas was hid in a veil of impenetrable darkness; the White Sea, or Arch Angel, was a very modern discovery; not found out till sir Hugh Willoughby doubled the North Cape, and paid dear for the adventure, being frozen to death with all his crew on the coast of Lapland; while his companion's ship, with the famous Mr. Chancellor, went on to the Gulph of Russia, called the White Sea, where no Christian strangers had ever been before him.

In these narrow circumstances stood the world's knowledge at the beginning of the 15th century, when men of genius began to look abroad and about them. Now, as it was wonderful to see a world so full of people, and people so capable of improving, yet so stupid, and so blind, so ignorant, and so perfectly unimproved; it was wonderful to see, with what a general alacrity they took the alarm, almost all together; preparing themselves as it were on a sudden, by a general inspiration, to spread knowledge through the earth, and to search into every thing, that it was impossible to uncover.

How surprising is it to look back, so little a way behind us, and see, that even in less than two hundred years, all this (now so self-wise) part of the world did not so much as know, whether there was any such place, as a Russia, a China, a Guinea, a Greenland, or a North Cape! That as to America, it was never supposed, there was any such place, neither had the world, though they stood upon the shoulders of four thousand years' experience, the least thought, so much as that there was any land that way!

As they were ignorant of places, so of things also; so vast are the improvements of science, that all our knowledge of mathematics, of nature, of the brightest part of human wisdom, had their admission among us within these two last centuries.

What was the world then, before! And to what were the heads and hands of mankind applied! The rich had no commerce, the poor no employment; war and the sword was the great field of honour, the stage of preferment, and you have scarce a man eminent in the world, for any thing before that time, but for a furious outrageous falling upon his fellow-creatures, like Nimrod, and his successors of modern memory.

The world is now daily increasing in experimental knowledge; and let no man flatter the age, with pretending we have arrived to a perfection of discoveries.

> What 's now discovered, only serves to show,
> That nothing's known, to what is yet to know.

On the Usefulness of the Mathematics.—From the Pennsylvania Gazette, No. 360, Oct. 30, 1735.

MATHEMATICS originally signifies any kind of discipline or learning, but now it is taken for that science, which teaches or contemplates whatever is capable of being numbered or measured. That part of the mathematics which relates to numbers only, is called *arithmetic*; and that which is concerned about measure in general, whether length, breadth, motion, force, &c. is called *geometry*.

As to the usefulness of arithmetic, it is well known that no business, commerce, trade, or employment whatsoever, even from the merchant to the shopkeeper, &c. can be managed and carried on, without the assistance of numbers; for by these the trader computes the value of all sorts of goods that he dealeth in, does his business with ease and certainty, and informs himself how matters stand at any time with respect to men, money, or merchandise, to profit and loss, whether he goes forward or backward, grows richer or poorer. Neither is this science only useful to the merchant, but is reckoned the *primum mobile* (or first mover) of all mundane affairs in general, and is useful for all sorts and degrees of men, from the highest to the lowest.

As to the usefulness of geometry, it is as certain, that no curious art or mechanic work, can either be invented, improved, or performed, without its assisting principles.

It is owing to this, that astronomers are put into a way of making their observations, coming at the knowledge of the extent of the heavens, the duration of time, the motions, magnitudes, and distances of the heavenly bodies, their situations, positions, risings, settings, aspects, and eclipses; also the measure of seasons, of years, and of ages.

It is by the assistance of this science, that geographers present to our view at once, the magnitude and form of the whole earth, the vast extent of the seas, the divisions of empires, kingdoms, and provinces.

It is by the help of geometry, the ingenious mariner is instructed how to guide a ship through the vast ocean, from one part of the earth to another, the nearest and safest way, and in the shortest time.

By help of this science the architects take their just measures for the structure of buildings, as private houses, churches, palaces, ships, fortifications, &c.

By its help engineers conduct all their works, take the situation and plan of towns, forts and castles, measure their distances from one another, and carry their measure into places that are only accessible to the eye.

From hence also is deduced that admirable art of drawing sun-dials on any plane howsoever situate, and for any part of world, to point out the exact time of the day, sun's declination, altitude, amplitude, azimuth, and other astronomical matters.

By geometry, the surveyor is directed how to draw a map of any country, to divide his lands, and to lay down and plot any piece of ground, and thereby discover the area in acres, rods, and perches. The gauger is instructed how to find the capacities or solid contents of all kinds of vessels, in barrels, gallons, bushels, &c. And the measurer is furnished with rules for finding the areas and contents of superfices and solids, and casting up all manner of workmanship. All these and many more useful arts, too many to be enumerated here, wholly depend upon the aforesaid sciences, viz. arithmetic and geometry.

This science is descended from the infancy of the world, the inventors of which were the first propagators of human kind, as Adam, Noah, Abraham, Moses, and divers others.

There has not been any science so much esteemed and honoured as this of the mathematics, nor with so much industry and vigilance become the care of great men, and laboured in by the potentates of the world, viz. emperors, kings, princes, &c.

Mathematical demonstrations, are a logic of as much or more use, than that commonly learned at schools, serving to a just formation of the mind, enlarging its capacity, and strengthening it so, as to render the same capable of exact reasoning, and discerning truth from falsehood in all occurrences, even subjects not mathematical. For which reason it is said, the Egyptians, Persians, and Lacedemonians, seldom elected any new kings, but such as had some knowledge in the mathematics, imagining those who had not, men of imperfect judgments, and unfit to rule and govern.

Though Plato's censure, that those who did not understand the 117th proposition of the 13th book of Euclid's Elements, ought not to be ranked amongst rational creatures, was unreasonable and unjust; yet to give a man the character of universal learning, who is destitute of a competent knowlege in the mathematics, is no less so.

The usefulness of some particular parts of the mathematics in the common affairs of human life, has rendered some knowledge of them very necessary to a great part of mankind, and very convenient to all the rest that are any way conversant beyond the limits of their own particular callings.

Those whom necessity has obliged to get their bread by manual industry, where some degree of art is required to go along with it, and who have had some insight into these studies, have very often found advantages from them sufficient to reward the pains they were at in acquiring them. And whatever may have been imputed to some other studies, under the notion of insignificancy and loss of time, yet these, I believe, never caused repentance in any, except it was for their remissness in the prosecution of them.

Philosophers do generally affirm, that human knowledge to be most excellent, which is conversant amongst the most excellent things. What science then can there be, more noble, more excellent, more useful for men, more admirably high and demonstrative, than this of the mathematics.

I shall conclude with what Plato says, *lib.* 7. of his Rebublic, with regard to the excellence and usefulness of geometry, being to this purpose:

"Dear Friend—You see then that mathematics are necessary, because by the exactness of the method, we get a habit of using our minds to the best advantage: and it is remarkable, that all men being capable by nature to reason and understand the sciences; the less acute, by studying this, though useless to them in every other respect, will gain this advantage, that their minds will be improved in reasoning aright; for no study employs it more, nor makes it susceptible of attention so much; and these who we find have a mind worth cultivating, ought to apply themselves to this study."

Causes of Earthquakes.—From the Pennsylvania Gazette, No. 470, Dec. 15, 1737.

The late earthquake felt here, and probably in all the neighbouring provinces, have made many people desirous to know what may be the natural cause of such violent concussions; we shall endeavour to gratify their curiosity by giving them the various opinions of the learned on that head.

Here naturalists are divided. Some ascribe them to water, others to fire, and others to air: and all of them with some appearance of reason. To conceive which, it is to be observed, that the earth every where abounds in huge subterraneous caverns, veins and canals, particularly about the roots of mountains: that of these cavities, veins, &c. some are full of water, whence are composed gulphs, abysses, springs, rivulets; and others full of exhalations; and that some parts of the earth are replete with nitre, sulphur, bitumen, vitriol, &c.

This premised, 1. The earth itself may sometimes be the cause of its own shaking; when the roots or basis of some large mass being dissolved, or worn away by a fluid underneath, it sinks into the same; and with its weight, occasions a tremor of the adjacent parts; produces a noise, and frequently an inundation of water.

2. The subterraneous waters may occasion earthquakes, by their overflowing, cutting out new courses, &c. Add, that the water being heated and rarefied by the subterraneous fires, may emit fumes, blasts, &c. which by their action, either on the water or immediately on the earth itself, may occasion great succussions.

3. The air may be the cause of earthquakes: for the air being a collection of fumes and vapours raised from the earth and water; if it be pent up in too narrow viscera of the earth, the subterraneous, or its own native heat, rarefying and expanding it, the force wherewith it endeavours to escape, may shake the earth: hence there arise divers species of earthquakes, according to the different position, quantity, &c. of the imprisoned aura.

Lastly, fire is a principal cause of earthquakes; both as it produces the aforesaid subterraneous aura or vapours; and as this aura, or spirit, from the different matter and composition whereof arise sulphur, bitumen, and other inflammable matters, takes fire, either from some other fire it meets withal, or from its collision against hard bodies, or its intermixture with other fluids; by which means, bursting out into a greater compass, the place becomes too narrow for it; so that pressing against it on all sides, the adjoining parts are

shaken; till having made itself a passage, it spends itself in a volcano, or burning mountain.

But to come nearer to the point. Dr. Lister is of opinion, that the material cause of thunder, lightning, and earthquakes, is one and the same, viz. the inflammable breath of the pyrites, which is a substantial sulphur, and takes fire of itself.

The difference between these three terrible phenomena, he takes only to consist in this; that this sulphur, in the former, is fired in the air; and in the latter under ground: which is a notion that Pliny had long before him: *Quidenim*, says he, *aliud est in terra tremor, quam in nube tonitru?*

This he thinks abundantly indicated by the same sulphurous smell being found in any thing burnt with lightning; and in the waters, &c. cast up in earthquakes, and even in the air before and after them.

Add, that they agree in the manner of the noise; which is carried on, as in a train, fired; the one rolling and rattling through the air, takes fire as the vapours chance to drive; as the other fired under ground, in like manner, moves with a desultory noise.

Thunder, which is the effect of the trembling of the air, caused by the same vapours dispersed through it, has force enough to shake our houses; and why may not there be thunder and lightning under ground, in some vast repositories there, I see no reason. Especially if we reflect, that the matter which composes the noisy vapour above us, is in much larger quantities under ground.

That the earth abounds in cavities, every body allows; and that these subterraneous cavities, are, at certain times, and in certain seasons, full of inflammable vapours, the damps in mines sufficiently witness, which fired, do every thing as in an earthquake, save in a lesser degree.

Add, that the pyrites alone, of all the known minerals, yields this inflammable vapour, is highly probable: for that no mineral or ore, whatsoever, is sulphurous, but as it is wholly, or in part, a pyrites; and that there is but one species of brimstone, which the pyrites naturally and only yields. The sulphur vive, or natural brimstone, which is found in and about the burning mountains, is certainly the effects of sublimation; and those great quantities of it said to be found about the skirts of volcanoes, is only an argument of the long duration and vehemence of those fires; possibly, the pyrites of the volcanoes, or burning-mountains, may be more sulphurous than ours: and indeed it is plain, that some of ours in England are very lean, and hold but little sulphur; others again very much; which may be one reason why England is so little troubled with earthquakes; and Italy, and almost all round the Mediterranean sea, so very much: though another reason is, the paucity of pyrites in England.

Comparing our earthquakes, thunder and lightning with theirs, it is observed, that there it lightens almost daily, especially in summer-time, here seldom; there thunder and lightning is of long duration, here it is soon over; there the earthquakes are frequent, long and terrible, with many paroxysms in a day, and that for many days; here very short, a few minutes, and scarce perceptible. To this purpose the subterraneous caverns in England are small and few compared to the vast vaults in those parts of the world; which is evident from the sudden disappearance of whole mountains and islands.

Dr. Woodward gives us another theory of earthquakes. He endeavours to show, that the subterraneous heat, or fire (which is continually elevating water out of the abyss, to furnish the earth with rain, dew, springs and rivers) being stopped in any part of the earth, and so diverted from its ordinary course, by some accidental glut or obstruction in the pores or passages, through which it used to ascend to the surface; becomes, by such means, preternaturally assembled in a greater quantity than usual into one place, and therefore causeth a great rarefaction and intumescence of the water of the abyss; putting it into great commotions and disorders, and at the same time making the like effort on the earth; which being expanded upon the face of the abyss, occasions that agitation and concussion we call an earthquake.

This effort in some earthquakes, he observes is so vehement, that it splits and tears the earth, making cracks and chasms in it some miles in length, which open at the instant of the shock, and close again in the intervals betwixt them: nay, it is sometimes so violent, that it forces the superincumbent strata, breaks them all throughout, and thereby perfectly undermines, and ruins the foundation of them; so that these failing, the whole tract, as soon as the shock is over, sinks down into the abyss, and is swallowed up by it; the water thereof immediately rising up and forming a lake in the place, where the said tract before was. That this effort being made in all directions indifferently, the fire dilating and expanding on all hands, and endeavouring to get room, and make its way through all obstacles, falls as foul on the waters of the abyss beneath, as on the earth above, forcing it forth, which way soever it can find vent or passage, as well through its ordinary exits, wells, springs, and the outlets of rivers, as through the chasms then newly opened; through the camini or spiracles of Ætna, or other neighbouring volcanoes; and these hiatus's at the bottom of the sea, whereby the abyss below opens into it and communicates with it. That as the water resident

in the abyss is, in all parts of it, stored with a considerable quantity of heat, and more especially in those where those extraordinary aggregations of this fire happen, so likewise is the water which is thus forced out of it; insomuch that when thrown forth and mixed with the waters of wells or springs of rivers, and the sea, it renders them very sensibly hot.

He adds, that though the abyss be liable to those commotions in all parts; yet the effects are no where very remarkable except in those countries which are mountainous, and consequently stony or cavernous underneath; and especially where the disposition of the strata is such, that those caverns open into the abyss, and so freely admit and entertain the fire; which assembling therein is the cause of the shock: it naturally steering its course that way where it finds the readiest reception, which is towards those caverns. Besides, that those parts of the earth which abound with strata of stone or marble, making the strongest opposition to this effort, are the most furiously shattered; and suffer much more by it, than those which consist of gravel sand, and the like laxer matter, which more easily give way, and make not so great resistance; but, above all, those countries which yield great store of sulphur and nitre, are, by far, the most injured by earthquakes; those minerals constituting in the earth a kind of natural gunpowder, which taking fire upon this assemblage, and approach of it, occasions that murmurring noise, that subterraneous thunder, which is heard rumbling in the bowels of the earth during earthquakes, and by the assistance of its explosive power, renders the shock much greater, so as sometimes to make miserable havoc and destruction.

And it is for this reason, that Italy, Sicily, Anatolia, and some parts of Greece, have been so long, and often alarmed and harassed by earthquakes; these countries being all mountainous and cavernous, abounding with stone and marble, and affording sulphur and nitre in great plenty.

Further, that Ætna, Vesuvius, Hæcla, and the other volcanoes, are only so many spiracles, serving for the discharge of this subterraneous fire, when it is thus preternaturally assembled. That where there happens to be such a structure and conformation of the interior parts of the earth; as that the fire may pass freely, and without impediment, from the caverns wherein it assembles unto those spiracles: it then readily and easily gets out from time to time, without shaking or disturbing the earth: but where such communication is wanting, or passage not sufficiently large and open, so that it cannot come at the spiracles, it heaves up and shocks the earth with greater or lesser impetuosity, according to the quantity of fire thus assembled, till it has made its way to the mouth of the volcano. That therefore there are scarce any countries much annoyed by earthquakes, but have one of these fiery vents; which are constantly in flames when any earthquake happens; as disgorging that fire, which whilst underneath was the cause of the disaster. Lastly, that were it not for these *diverticula*, it would rage in the bowels of the earth much more furiously, and make greater havoc than it doth.

We have seen what fire and water may do, and that either of them are sufficient for all the phenomena of earthquakes; if they should both fail, we have a third agent, scarce inferior to either of them: the reader must not be surprised when we tell him it is air.

Mons. Amontons, in the *Memoires de l'Acad. des Sciences, An.* 1703, has an express discourse to prove, that on the foot of the new experiments of the weight and spring of the air, a moderate degree of heat may bring the air into a condition capable of causing earthquakes. It is shown, that at the depth of 43,528 fathoms below the surface of the earth air is only one fourth less heavy than mercury. Now, this depth of 43,528 fathoms is only a 74th part of the semi-diameter of the earth. And the vast sphere beyond this depth, in diameter 6,451,538 fathoms, may probably be only filled with air; which will be here greatly condensed, and much heavier than the heaviest bodies we know in nature. But it is found by experiment, that the more air is compressed the more does the same degree of heat increase its spring, and the more capable does it render it of a violent effect: and that, for instance, the degree of heat of boiling water increases the spring of the air above what it has in its natural state, in our climate, by a quantity equal to a third of the weight wherewith it is pressed. Whence we may conclude, that a degree of heat, which on the surface of the earth, will only have a moderate effect, may be capable of a very violent one below. And as we are assured, that there are in nature degrees of heat, much more considerable than that of boiling water: it is very possible there may be some, whose violence, further assisted by the exceeding weight of the air, may be more than sufficient to break and overturn this solid orb of 43,528 fathoms; whose weight, compared to that of the included air, would be but a trifle.

Chemistry furnishes us a method of making artificial earthquakes, which shall have all the great effects of natural ones: which, as it may illustrate the process of nature in the production of these terrible phenomena under ground, we shall here add.

To twenty pounds of iron filings, add as many of sulphur: mix, work, and temper the whole together with a little water, so as to form a mass, half moist and half dry. This being buried three or four feet under ground, in

six or seven hours time, will have a prodigious effect: the earth will begin to tremble, crack and smoke, and fire and flame burst through.

Such is the effect even of the two cold bodies, in cold ground: there only wants a sufficient quantity of this mixture to produce a true Ætna. If it were supposed to burst out under the sea, it would produce a spout. And if it were in the clouds, the effect would be thunder and lightning.

An earthquake is defined to be a vehement shake, or agitation of some considerable place, or part of the earth; from natural causes; attended with a huge noise like thunder, and frequently with an eruption of water, or fire, or smoke, or winds, &c.

They are the greatest and most formidable phenomena of nature. Aristotle and Pliny distinguish two kinds, with respect to the manner of the shake, viz. a tremor and a pulsation; the first being horizontal, in alternate vibrations, compared to the shaking of a person in ague. The second perpendicular, up and down, their motion resembling that of boiling.

Agricola increases the number, and makes four kinds, which Alb. Magnus again reduces to three, viz. inclination, when the earth librates alternately from right to left; by which mountains have been sometimes brought to meet, and clash against each other: pulsation, when it beats up and down like an artery: and trembling, when it shakes and totters every way, like a flame.

The Philosophical Transactions furnish us with abundance of histories of earthquakes; particularly one at Oxford, in 1665, by Dr. Wallis and Mr. Boyle. Another at the same place in 1683, by Mr. Pigot. Another in Sicily, in 1692-3 by Mr. Hartop, Fa. Allessandro Burgos, and Vin. Bonajutus, which last is one of the most terrible ones in all history.

It shook the whole island; and not only that, but Naples and Malta shared in the shock. It was of the second kind mentioned by Aristotle and Pliny, viz. a perpendicular pulsation, or succession. It was impossible, says the noble Bonajutus, for any body, in this country, to keep on their legs, on the dancing earth; nay, those that lay on the ground, were tossed from side to side, as on a rolling billow: high walls leaped from their foundations several paces.

The mischief it did is amazing: almost all the buildings in the countries were thrown down. Fifty-four cities and towns, besides an incredible number of villages, were either destroyed or greatly damaged. We shall only instance the fate of Catanea, one of the most famous, ancient, and flourishing cities in the kingdom; the residence of several monarchs, and an university. This once famous, now unhappy Catanea, to use the words of Fa. Burgos, had the greatest share in the tragedy. Fa. Anthon. Serovita, being on his way thither, and at the distance of a few miles, observed a black cloud, like night, hovering over the city; and there arose from the mouth of Mongibello, great spires of flame, which spread all around. The sea all of a sudden began to roar, and rise in billows; and there was a blow, as if all the artillery in the world had been at once discharged. The birds flew about astonished, the cattle in the fields ran crying, &c. His and his companion's horse stopped short, trembling; so that they were forced to alight. They were no sooner off, but they were lifted from the ground above two palms; when casting his eyes towards Catanea, he with amazement saw nothing but a thick cloud of dust in the air. This was the scene of their calamity: for of the magnificent Catanea, there is not the least footstep to be seen. S. Bonajutus assures us, that of 18,914 inhabitants, 18,000 perished therein. The same author, from a computation of the inhabitants, before and after the earthquake, in the several cities and towns, finds that near 60,000 perished out of 254,900.

Jamaica is remarkable for earthquakes. The inhabitants, Dr. Sloan informs us, expect one every year. That author gives us the history of one in 1687: another horrible one in 1692, is described by several anonymous authors. In two minutes time it shook down and drowned nine tenths of the town of Port Royal. The houses sunk outright, thirty or forty fathoms deep. The earth opening, swallowed up people; and they rose in other streets; some in the middle of the harbour, and yet were saved; though there were 2000 people lost, and 1000 acres of land sunk. All the houses were thrown down throughout the island. One Hopkins had his plantation removed half a mile from its place. Of all wells, from one fathom to six or seven, the water flew out at the top with a vehement motion. While the houses, on the one side of the street were swallowed up, on the other they were thrown on heaps; and the sand in the street rose like waves in the sea, lifting up every body that stood on it, and immediately dropping down into pits; and at the same instant, a flood of waters breaking in, rolled them over and over; some catching hold of beams and rafters, &c. Ships and sloops in the harbour were overset and lost; the Swan frigate particularly, by the motion of the sea, and sinking of the wharf, was driven over the tops of many houses. It was attended with a hollow rumbling noise like that of thunder. In less than a minute three quarters of the houses, and the ground they stood on with the inhabitants, were all sunk quite under water; and the little part, left behind, was no better than a heap of rubbish. The shake was so violent, that it threw people down on their knees, or their faces, as they

were running about for shelter. The ground heaved and swelled like a rolling sea, and several houses still standing, were shuffled and moved some yards out of their places. A whole street is said to be twice as broad now as before; and in many places the earth would crack, and open, and shut, quick and fast. Of which openings, two or three hundred might be seen at a time: in some whereof, the people were swallowed up; others, the closing earth caught by the middle, and pressed to death; in others, the heads only appeared. The larger openings swallowed up houses; and out of some would issue whole rivers of waters, spouted up a great height into the air, and threatening a deluge to that part the earthquake spared. The whole was attended with stenches and offensive smells, the noise of falling mountains at a distance, &c. and the sky in a minute's time, was turned dull and reddish, like a glowing oven.—Yet, as great a sufferer as Port Royal was, more houses were left standing therein, than on the whole island beside. Scarce a planting house, or sugar work was left standing in all Jamaica. A great part of them were swallowed up, houses, people, trees, and all at one gap: in lieu of which afterwards, appeared great pools of water, which when driven up, left nothing but sand, without any mark that ever tree or plant had been thereon. Above twelve miles from the sea, the earth gaped and spouted out, with a prodigious force, vast quantities of water into the air: yet the greatest violences were among the mountains and rocks: and it is a general opinion, that the nearer the mountains, the greater the shake; and that the cause thereof lay there. Most of the rivers were stopped up for twenty-four hours, by the falling of the mountains, till swelling up, they found themselves new tracts and channels, tearing up in their passage trees, &c. After the great shake, those people who escaped, got on board ships in the harbour, where many continued above two months; the shakes all that time being so violent, and coming so thick, sometimes two or three in an hour accompanied with frightful noises like a ruffling wind, or a hollow rumbling thunder, with brimstone blasts, that they durst not come ashore. The consequences of the earthquake was a general sickness, from the noisome vapours belched forth, which swept away above 3000 persons.

After the detail of these horrible convulsions, the reader will have but little curiosity left, for the less considerable phenomena of the earthquake at Lima, in 1687, described by Fa. Alvarez de Toledo, wherein above 5000 persons were destroyed; this being of the vibratory kind, so that the bells in the church rung of themselves: or that at Batavia in 1699, by Witzen: that in the north of England in 1703, by Mr. Thoresby: or lastly those in New England in 1663, and 1670, by Dr. Mather.

Public Men.—From the Pennsylvania Gazette, No. 95, September 3, 1730.

THE following is a dialogue between Socrates, the great Athenian philosopher, and one Glaucon a private man of mean abilities, but ambitious of being chosen a senator, and of governing the republic; wherein Socrates, in a pleasant manner, convinces him of his incapacity for public affairs, by making him sensible of his ignorance of the interests of his country, in their several branches, and entirely dissuades them from any attempt of that nature. There is also added, at the end, part of another dialogue, the same Socrates had with one Charmidas, a worthy man, but too modest, wherein he endeavours to persuade him to put himself forward and undertake public business, as being very capable of it. The whole is taken from Xenophon's Memorable Things of Socrates, *lib.* 3.

A certain man, whose name was Glaucon, the son of Ariston, had so fixt it in his mind to govern the republic, that he frequently presented himself before the people to discourse of the affairs of state, though all the world laughed at him for it; nor was it in the power of his relations or friends to dissuade him from that design. But Socrates had a kindness for him, on account of Plato his brother, and he only it was who made him change his resolution; he met him, and accosted him in so winning a manner, that he first obliged him to hearken to his discourse. He began with him thus: You have a mind then to govern the republic? I have so, answered Glaucon. You cannot, replied Socrates, have a more noble design; for if you can accomplish it so as to become absolute, you will be able to serve your friends, you will raise your family, you will extend the bounds of your country, you will be known, not only in Athens, but through all Greece, and perhaps your renown will fly even to the barbarous nations, as did that of Themistocles. In short, wherever you come, you will have the respect and admiration of all the world. These words soothed Glaucon, and won him to give ear to Socrates, who went on in this manner. But it is certain, that if you desire to be honoured, you must be useful to the state. Certainly, said Glaucon. And in the name of all the gods, replied Socrates, tell me, what is the first service that you intend to render the state? Glaucon was considering what to answer, when Socrates continued. If you design to make the fortune of one of your friends, you would endeavour to make him rich, and thus perhaps you will make it your business to enrich the republic? I would, an-

swered Glaucon. Socrates replied: would not the way to enrich the republic be to increase its revenue! It is very likely it would, said Glaucon. Tell me then in what consists the revenue of the state, and to how much it may amount? I presume you have particularly studied this matter, to the end that if any thing should be lost on one hand, you might know where to make it good on another, and that if a fund should fail on a sudden, you might immediately be able to settle another in its place! I protest, answered Glaucon, I have never thought of this. Tell me at least the expenses of the republic, for no doubt you intend to retrench the superfluous! I never thought of this neither, said Glaucon. You were best then to put off to another time your design of enriching the republic, which you can never be able to do, while you are ignorant both of its expenses and revenue. There is another way to enrich a state, said Glaucon, of which you take no notice, and that is by the ruin of its enemies. You are in the right, answered Socrates: but to this end, it is necessary to be stronger than they, otherwise we shall run the hazard of losing what we have: he therefore who talks of undertaking a war, ought to know the strength on both sides, to the end that if his party be the stronger, he may boldly advise for war, and that if it be the weaker, he may dissuade the people from engaging themselves in so dangerous an enterprise. All this is true. Tell me then, continued Socrates, how strong our forces are by sea and land, and how strong are our enemies? Indeed, said Glaucon, I cannot tell you on a sudden. If you have a list of them in writing, pray show it me, I should be glad to hear it read. I have it not yet. I see then, said Socrates, that we shall not engage in war so soon: for the greatness of the undertaking will hinder you from maturely weighing all the consequences of it in the beginning of your government. But, continued he, you have thought of the defence of the country, you know what garrisons are necessary, and what are not; you know what number of troops is sufficient in one, and not sufficient in another: you will cause the necessary garrisons to be reinforced, and will disband those that are useless? I should be of opinion said Glaucon, to leave none of them on foot, because they ruin a country, on pretence of defending it. But, Socrates objected if all the garrisons are taken away, there would be nothing to hinder the first comer from carrying off what he pleased: but how come you to know that the garrisons behave themselves so ill? Have you been upon the place, have you seen them? Not at all; but I suspect it to be so. When therefore we are certain of it, said Socrates, and can speak upon better grounds than simple conjectures, we will propose this advice to the senate. It may be well to do so, said Glaucon. It comes into my mind, too, continued Socrates, that you have never been at the mines of silver, to examine why they bring not in so much now as they did formerly. You say true, I have never been there. Indeed they say the place is very unhealthy, and that may excuse you.—You rally me now, said Glaucon. Socrates added; but I believe you have at least observed how much corn our lands produce, how long it will serve to supply our city, and how much more we shall want for the whole year; to the end you may not be surprised with a scarcity of bread, but may give timely orders for the necessary provisions. There is a deal to do, said Glaucon, if we must take care of all these things. There is so, replied Socrates, and it is even impossible to manage our own families well, unless we know all that is wanting, and take care to provide it. As you see, therefore, that our city is composed of above ten thousand families, and it being a difficult task to watch over them all at once, why did you not first try to retrieve your uncle's affairs which are running to decay, and after having given that proof of your industry, you might have taken a greater trust upon you? But now, when you find yourself incapable of aiding a private man, how can you think of behaving yourself so as to be useful to a whole people? ought a man who has not strength enough to carry a hundred pound weight, undertake to carry a heavier burden? I would have done good service to my uncle, said Glaucon, if he would have taken my advice. How! replied Socrates, have you not hitherto been able to govern the mind of your uncle, and do you now believe yourself able to govern the minds of all the Athenians, and his among the rest? Take heed, my dear Glaucon, take heed lest too great a desire of power should render you despised; consider how dangerous it is to speak and entertain ourselves concerning things we do not understand: what a figure do those forward and rash people make in the world, who do so; and judge yourself, whether they acquire more esteem than blame, whether they are more admired than contemned. Think, on the contrary, with how much honour a man is regarded, who understands perfectly what he says, and what he does, and then you will confess that renown and applause have always been the recompence of true merit, and shame the reward of ignorance and temerity. If therefore you would be honoured, endeavour to be a man of true merit; and if you enter upon the government of the republic, with a mind more sagacious than usual, I shall not wonder if you succeed in all your designs.

Thus Socrates put a stop to the disorderly ambition of this man: but on an occasion quite contrary, he in the following manner exhorted Charmides to take an employment. He

was a man of sense, and more deserving than most others in the same post; but as he was of a modest disposition, he constantly declined and made great difficulties of engaging himself in public business. Socrates therefore addressed himself to him in this manner. If you knew any man that could gain the prizes in the public games, and by that means render himself illustrious, and acquire glory to his country, what would you say of him if he refused to offer himself to the contest? I would say, answered Charmidas, that he was a mean spirited effeminate fellow. And if a man were capable of governing a republic, of increasing its power by his advice, and of raising himself by this means to a high degree of honour, would you not brand him likewise with meanness of soul, if he would not present himself to be employed? Perhaps I might, said Charmidas; but why do you ask me this question; Socrates replied; because you are capable of managing the affairs of the republic, and nevertheless you avoid doing so, though in quality of a citizen you are *obliged* to take care of the commonwealth. Be no longer then thus negligent in this matter, consider your abilities and your duty with more attention, and let not slip the occasions of serving the republic, and of rendering it, if possible, more flourishing than it is. This will be a blessing, whose influence will descend not only on the other citizens, but on your best friends and yourself.

On Smuggling, and its various species.—Published in the London Chronicle, November 24, 1767.

Sir,—There are many people that would be thought, and even think themselves, *honest* men, who fail nevertheless in particular points of honesty; deviating from that character sometimes by the prevalence of mode or custom, and sometimes through mere inattention; so that their *honesty* is partial only, and not *general* or universal. Thus one, who would scorn to overreach you in a bargain, shall make no scruple of tricking you a little now and then at cards: another, that plays with the utmost fairness, shall with great freedom cheat you in the sale of a horse. But there is no kind of dishonesty, into which otherwise good people more easily and frequently fall, than that of defrauding government of its revenues by smuggling when they have an opportunity, or encouraging smugglers by buying their goods.

I fell into these reflections the other day, on hearing two gentlemen of reputation discoursing about a small estate, which one of them was inclined to sell, and the other to buy; when the seller, in recommending the place, remarked, that its situation was very advantageous on this account, that, being on the sea-coast in a smuggling country, one had frequent opportunities of buying many of the expensive articles used in a family (such as tea, coffee, chocolate, brandy, wines, cambrics, Brussels laces, French silks, and all kinds of India goods, 20), 30, and in some articles 50 *per cent.* cheaper, than they could be had in the more interior parts, of traders that paid duty.—The other *honest* gentleman allowed this to be an advantage, but insisted, that the seller, in the advanced price he demanded on that account, rated the advantage much above its value. And neither of them seemed to think dealing with smugglers a practice, that an *honest* man (provided he got his goods cheap) had the least reason to be ashamed of.

At a time when the load of our public debt, and the heavy expense of maintaining our fleets and armies to be ready for our defence on occasion, makes it necessary, not only to continue old taxes, but often to look out for new ones, perhaps it may not be unuseful to state this matter in a light that few seem to have considered it in.

The people of Great Britain, under the happy constitution of this country, have a privilege few other countries enjoy, that of choosing the third branch of the legislature, which branch has alone the power of regulating their taxes. Now whenever the government finds it necessary for the common benefit, advantage, and safety of the nation, for the security of our liberties, property, religion, and every thing that is dear to us, that certain sums shall be yearly raised by taxes, duties, &c. and paid into the public treasury, thence to be dispensed by government for those purposes; ought not every *honest man* freely and willingly to pay his just proportion of this necessary expense? Can he possibly preserve a right to that character, if, by fraud, stratagem, or contrivance, he avoids that payment in whole or in part.

What should we think of a companion, who, having supped with his friends at a tavern, and partaken equally of the joys of the evening with the rest of us, would nevertheless contrive by some artifice to shift his share of the reckoning upon others, in order to go off scot-free? If a man who practised this, would, when detected, be deemed and called a scoundrel, what ought he to be called, who can enjoy all the inestimable benefits of public society, and yet by smuggling, or dealing with smugglers, contrive to evade paying his just share of the expense, as settled by his own representatives in parliament; and wrongfully throw it upon his honester and perhaps much poorer neighbours? He will perhaps be ready to tell me, that he does not wrong his neighbours; he scorns the imputation, he only cheats the king a little, who is

very able to bear it. This, however, is a mistake. The public treasure is the treasure of the nation, to be applied to national purposes. And when a duty is laid for a particular public and necessary purpose, if, through smuggling, that duty falls short of raising the sum required, and other duties must therefore be laid to make up the deficiency, all the additional sum laid by the new duties and paid by other people, though it should amount to no more than a half-penny or a farthing per head, is so much actually picked out of the pockets of those other people by the smugglers and their abettors and encouragers. Are they then any better or other than pickpokets? and what mean, low, rascally pickpockets must those be, that can pick pockets for halfpence and for farthings?

I would not however be supposed to allow in what I have just said, that cheating the king is a less offence against honesty than cheating the public. The king and the public in this case are different names for the same thing; but if we consider the king distinctly it will not lessen the crime: it is no justification of a robbery, that the person robbed was rich and able to bear it. The king has as much right to justice as the meanest of his subjects; and as he is truly the common *father* of his people, those that rob him fall under the Scripture wo, pronounced against the son *that robbeth his father, and saith it is no sin.*

Mean as this practice is, do we not daily see people of character and fortune engaged in it for trifling advantages to themselves?—Is any lady ashamed to request of a gentleman of her acquaintance, that when he returns from abroad he would smuggle her home a piece of silk or lace from France or Flanders? Is any gentleman ashamed to undertake and execute the commission?—Not in the least. They will talk of it freely, even before others whose pockets they are thus contriving to pick by this piece of knavery.

Among other branches of the revenue, that of the post-office is, by a late law, appropriated to the discharge of our public debt, to defray the expenses of the state. None but members of parliament, and a few public officers have now a right to avoid, by a frank, the payment of postage. When any letter, not written by them or on their business, is franked by any of them, it is a hurt to the revenue, an injury which they must now take the pains to conceal by writing the whole superscription themselves. And yet such is our insensibility to justice in this particular, that nothing is more common than to see, even in a reputable company, a *very honest* gentleman or lady declare his or her intention to cheat the nation of three pence by a frank, and without blushing apply to one of the very legislators themselves, with a modest request, that he would be pleased to become an accomplice in the crime, and assist in the perpetration.

There are those who by these practices take a great deal in a year out of the public purse, and put the money into their own private pockets. If, passing through a room where public treasure is deposited, a man takes the opportunity of clandestinely pocketing and carrying off a guinea, is he not truly and properly a thief! And if another evades paying into the treasury a guinea he ought to pay in, and applies it to his own use, when he knows it belongs to the public as much as that which has been paid in, what difference is there in the nature of the crime, or the baseness of committing it?

Some laws make the receiving of stolen goods equally penal with stealing, and upon this principle, that if there were no receivers, there would be few thieves. Our proverb too says truly, that *the receiver is as bad as the thief.* By the same reasoning, as there would be few smugglers, if there were none who knowingly encouraged them by buying their goods, we may say, that the encouragers of smuggling are as bad as the smugglers; and that, as smugglers are a kind of thieves, both equally deserve the punishments of thievery.

In this view of wronging the revenue, what must we think of those who can evade paying for their wheels* and their plate, in defiance of law and justice, and yet declaim against corruption and peculation, as if their own hands and hearts were pure and unsullied? The Americans offend us grievously, when, contrary to our laws, they smuggle goods into their own country: and yet they had no hand in making those laws. I do not however pretend from thence to justify them. But I think the offence much greater in those who either directly or indirectly have been concerned in making the very laws they break. And when I hear them exclaiming against the Americans, and for every little infringment of the acts of trade, or obstruction given by a petty mob to an officer of our customs in that country, calling for vengeance against the whole people as REBELS and traitors, I cannot help thinking there are still those in the world who can *see a mote in their brother's eye, while they do not discern a beam in their own;* and that the old saying is as true now as ever it was, *one man may better steal a horse, than another look over the hedge.*

B. F.

Plan for improving the Condition of the Free Blacks.

THE business relative to free blacks shall be transacted by a committee of twenty-four

* Alluding to the British taxes on carriage wheels, and on plate.

persons, annually elected by ballot, at the meeting of this society, in the month called April; and in order to perform the different services with expedition, regularity, and energy, this committee shall resolve itself into the following sub-committees, viz:

I. A committee of inspection shall superintend the morals, general conduct, and ordinary situation of the free negroes, and afford them advice and instruction, protection from wrongs, and other friendly offices.

II. A committee of guardians, who shall place out children and young people with suitable persons, that they may (during a moderate time of apprenticeship, or servitude) learn some trade or other business of subsistence. The committee may effect this partly by a persuasive influence on parents and the persons concerned; and partly by co-operating with the laws, which are, or may be enacted for this, and similar purposes: in forming contracts on these occasions, the committee shall secure to the society, as far as may be practicable, the right of guardianship over the persons so bound.

III. A committee of education, who shall superintend the school-instruction of the children and youth of the free blacks; they may either influence them to attend regularly the schools already established in this city, or form others with this view; they shall, in either case, provide, that the pupils may receive such learning as is necessary for their future situation in life; and especially a deep impression of the most important, and generally acknowledged moral and religious principles. They shall also procure and preserve a regular record of the marriages, births, and manumissions of all free blacks.

IV. A committee of employ, who shall endeavour to procure constant employment for those free negroes who are able to work: as the want of this would occasion poverty, idleness, and many vicious habits. This committee will, by sedulous inquiry, be enabled to find common labour for a great number; they will also provide, that such, as indicate proper talents, may learn various trades, which may be done by prevailing upon them to bind themselves for such a term of years, as shall compensate their masters for the expense and trouble of instruction and maintenance. The committee may attempt the institution of some useful and simple manufactures, which require but little skill, and also may assist, in commencing business, such as appear to be qualified for it.

Whenever the committee of inspection shall find persons of any particular description requiring attention, they shall immediately direct them to the committee, of whose care they are the proper objects.

In matters of a mixed nature, the committees shall confer, and, if necessary, act in concert. Affairs of great importance shall be referred to the whole committee.

The expense incurred by the prosecution of this plan, shall be defrayed by a fund, to be formed by donations, or subscriptions, for these particular purposes, and to be kept separate from the other funds of this society.

The committee shall make a report of their proceedings, and of the state of their stock, to the society, at their quarterly meetings, in the months called April and October.

Philadelphia, 26th October, 1789.

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*Remarks concerning the Savages of North America.**

Savages we call them, because their manners differ from ours, which we think the perfection of civility; they think the same of theirs.

Perhaps, if we could examine the manners of different nations with impartiality, we should find no people so rude, as to be without any rules of politeness; nor any so polite, as not to have some remains of rudeness.

The Indian men, when young, are hunters and warriors; when old, counsellors; for all their government is by the council or advice of the sages; there is no force, there are no prisons, no officers to compel obedience, or inflict punishment. Hence they generally study oratory, the best speaker having the most influence. The Indian women till the ground, dress the food, nurse and bring up the children, and preserve and hand down to posterity the memory of public transactions. These employments of men and women are accounted natural and honourable. Having few artificial wants, they have abundance of leisure for improvement by conversation. Our laborious manner of life, compared with theirs, they esteem slavish and base; and the learning on which we value ourselves, they regard as frivolous and useless. An instance of this occurred at the treaty of Lancaster, in Pennsylvania, anno 1744, between the government of Virginia and the Six Nations. After the principal business was settled, the commissioners from Virginia acquainted the Indians by a speech, that there was at Williamsburg a college, with a fund, for educating Indian youth; and that if the chiefs of the Six Nations would send down half a dozen of their sons to that college, the government would take care that they should be well provided for, and instructed in all the learning of the white people. It is one of the Indian rules of politeness, not to answer a public proposition the same day that it is made; they think it would be treating it as a light matter, and that they show it respect

* This paper and the two next in order were published in separate pamphlets in England, in the year 1784 and afterwards in 1787.

by taking time to consider it, as of a matter important. They therefore deferred their answer till the day following: when their speaker began, by expressing their deep sense of the kindness of the Virginia government, in making them that offer; "for we know," says he, "that you highly esteem the kind of learning taught in those colleges, and that the maintenance of our young men, while with you, would be very expensive to you. We are convinced therefore, that you mean to do us good by your proposal; and we thank you heartily. But you, who are wise, must know, that different nations have different conceptions of things; and you will therefore not take it amiss, if our ideas of this kind of education happen not to be the same with yours. We have had some experience of it: several of our young people were formerly brought up at the colleges of the northern provinces; they were instructed in all your sciences; but when they came back to us, they were bad runners, ignorant of every means of living in the woods, unable to bear either cold or hunger, knew neither how to build a cabin, take a deer, or kill an enemy, spoke our language imperfectly, were therefore neither fit for hunters, warriors, nor counsellors; they were totally good for nothing. We are however not the less obliged by your kind offer, though we decline accepting it: and to show our grateful sense of it, if the gentlemen of Virginia will send us a dozen of their sons, we will take great care of their education, instruct them in all we know, and make *men* of them.

Having frequent occasions to hold public councils, they have acquired great order and decency in conducting them. The old men sit in the foremost ranks, the warriors in the next, and the women and children in the hindmost. The business of the women is to take exact notice of what passes, imprint it in their memories, for they have no writing, and communicate it to their children. They are the records of the council, and they preserve the tradition of the stipulations in treaties a hundred years back; which, when we compare with our writings, we always find exact. He that would speak, rises. The rest observe a profound silence. When he has finished and sits down, they leave him five or six minutes to recollect, that, if he has omitted any thing he intended to say, or has any thing to add, he may rise again and deliver it. To interrupt another, even in common conversation, is reckoned highly indecent. How different this is from the conduct of a polite British house of commons, where scarce a day passes without some confusion, that makes the speaker hoarse in calling *to order;* and how different from the mode of conversation in many polite companies of Europe, where, if you do not deliver your sentence with great rapidity, you are cut off in the middle of it by the impatient loquacity of those you converse with, and never suffered to finish it!

The politeness of these savages in conversation is indeed carried to excess, since it does not permit them to contradict or deny the truth of what is asserted in their presence. By this means they indeed avoid disputes; but then it becomes difficult to know their minds, or what impression you make upon them. The missionaries who have attempted to convert them to christianity, all complain of this as one of the great difficulties of their mission. The Indians hear with patience the truths of the gospel explained to them, and give their usual tokens of assent and approbation: you would think they were convinced. No such matter. It is mere civility.

A Swedish minister, having assembled the chiefs of the Susquehanna Indians, made a sermon to them, acquainting them with the principal historical facts on which our religion is founded; such as the fall of our first parents by eating an apple, the coming of Christ to repair the mischief, his miracles and suffering, &c.—When he had finished, an Indian orator stood up to thank him. "What you have told us," says he, "is all very good. It is indeed bad to eat apples. It is better to make them all into cyder. We are much obliged by your kindness in coming so far, to tell us those things which you have heard from your mothers. In return, I will tell you some of those we have heard from ours.

"In the beginning, our fathers had only the flesh of animals to subsist on, and if their hunting was unsuccessful, they were starving. Two of our young hunters having killed a deer, made a fire in the woods to broil some parts of it. When they were about to satisfy their hunger, they beheld a beautiful young woman descend from the clouds, and seat herself on that hill which you see yonder among the Blue Mountains. They said to each other, it is a spirit that perhaps has smelt our broiling venison, and wishes to eat of it: let us offer some to her. They presented her with the tongue: she was pleased with the taste of it, and said, your kindness shall be rewarded; come to this place after thirteen moons, and you shall find something that will be of great benefit in nourishing you and your children to the latest generations. They did so, and to their surprise found plants they had never seen before: but which, from that ancient time, have been constantly cultivated among us, to our great advantage. Where her right hand had touched the ground, they found maize; where her left hand had touched it they found kidney-beans; and where her backside had sat on it, they found tobacco." The good missionary, disgusted with this idle tale, said, "What I delivered to you were sacred truths, but what you tell me is mere

fable, fiction, and falsehood." The Indian, offended, replied, "My brother, it seems your friends have not done you justice in your education; they have not well instructed you in the rules of common civility. You saw that we, who understand and practise those rules, believed all your stories, why do you refuse to believe ours?"

When any of them come into our towns, our people are apt to crowd round them, gaze upon them, and incommode them where they desire to be private; this they esteem great rudeness, and the effect of the want of instruction in the rules of civility and good manners. "We have," say they, "as much curiosity as you, and when you come into our towns, we wish for opportunities of looking at you; but for this purpose we hide ourselves behind bushes, where you are to pass, and never intrude ourselves into your company."

Their manner of entering one another's villages has likewise its rules. It is reckoned uncivil in travelling strangers, to enter a village abruptly, without giving notice of their approach. Therefore, as soon as they arrive within hearing, they stop and hollow, remaining there till invited to enter. Two old men usually come out to them, and lead them in. There is in every village a vacant dwelling called the strangers' house. Here they are placed, while the old men go round from hut to hut, acquainting the inhabitants, that strangers are arrived, who are probably hungry and weary; and every one sends them what he can spare of victuals, and skins to repose on. When the strangers are refreshed, pipes and tobacco are brought; and then, but not before, conversation begins, with inquiries who they are, whither bound, what news, &c. and it usually ends with offers of service, if the strangers have occasion for guides, or any necessaries for continuing their journey; and nothing is exacted for the entertainment.

The same hospitality, esteemed among them as a principal virtue, is practised by private persons; of which *Conrad Weiser*, our interpreter, gave me the following instance. He had been naturalised among the Six Nations, and spoke well the Mohock language. In going through the Indian country, to carry a message from our governor to the council at Onondaga, he called at the habitation of Canassetego, an old acquaintance, who embraced him, spread furs for him to sit on, and placed before him some boiled beans and venison, and mixed some rum and water for his drink. When he was well refreshed, and had lit his pipe, Canassetego began to converse with him; asked how he had fared the many years since they had seen each other; whence he then came; what occasioned the journey, &c. Conrad answered all his questions; and when the discourse began to flag, the Indian to continue it said, "Conrad, you have lived long among the white people, and know something of their customs; I have been sometimes at Albany, and have observed, that once in seven days they shut up their shops, and assemble all in the great house; tell me what it is for? What do they do there?" "They meet there," says Conrad, "to hear and learn *good things*." "I do not doubt," says the Indian, "that they tell you so; they have told me the same: but I doubt the truth of what they say, and I will tell you my reasons. I went lately to Albany to sell my skins and buy blankets, knives, powder, rum, &c. You know I used generally to deal with Hans Hanson; but I was a little inclined this time to try some other merchants. However, I called first upon Hans, and asked him what he would give for beaver. He said he could not give any more than four shillings a pound: but, says he, I cannot talk on business now; this is the day when we meet together to learn *good things*, and I am going to meeting. So I thought to myself, since I cannot do any business to-day, I may as well go to the meeting too, and I went with him. There stood up a man in black, and began to talk to the people very angrily. I did not understand what he said; but perceiving that he looked much at me and at Hanson, I imagined he was angry at seeing me there; so I went out, sat down near the house, struck fire, and lit my pipe, waiting till the meeting should break up. I thought too, that the man had mentioned something of beaver, and I suspected it might be the subject of their meeting. So when they came out I accosted my merchant. Well, Hans, says I, I hope you have agreed to give more than four shillings a pound? No, says he, I cannot give so much, I cannot give more than three shillings and sixpence. I then spoke to several other dealers, but they all sung the same song,——three and sixpence,——three and sixpence. This made it clear to me that my suspicion was right; and that whatever they pretended of meeting to learn *good things*, the real purpose was to consult how to cheat Indians in the price of beaver. Consider but a little, Conrad, and you must be of my opinion. If they met so often to learn *good things*, they would certainly have learned some before this time. But they are still ignorant. You know our practice.

"If a white man, in travelling through our country, enters one of our cabins, we all treat him as I do you; we dry him if he is wet, we warm him if he is cold, and give him meat and drink, that he may allay his thirst and hunger; and we spread soft furs for him to rest and sleep on: we demand nothing in return. But if I go into a white man's house at Albany, and ask for victuals and drink, they say, Where is your money? and if I have

none, they say, Get out, you Indian dog. You see they have not yet learned those little *good things*, that we need no meetings to be instructed in, because our mothers taught them to us, when we were children; and therefore it is impossible their meetings should be, as they say, for any such purpose, or have any such effect; they are only to contrive *the cheating of Indians in the price of beaver.*"

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*Memoire de Sir John Dalrymple ou Projet du Lord Rocheford, pour empecher la Guerre.—Anecdote Historique.**

AVANT que la France se fut declarée pour l'Amérique, lord Rocheford, autrefois Ambassadeur en Espagne et en France, formoit un Projet pour empêcher la guerre. Cétoit que 'Angleterre proposeroit un grand traité de confédération entre la France, l'Espagne, le Portugal et l'Angleterre, qui devoit avoir trois objets. Le premier, une garantie mutuelle entre ces quatre Puissances de leurs possessions dans l'Amérique et dans les deux Indes, avec une provision qu'une guerre dans l'Europe ne seroit jamais une guerre dans ces rémotes régions sous quelque pretexte que ce soit, et fixant le nombre des troupes et des vaisseaux que les puissances contractantes devoient fournir contre la puissance contrevenante la paix dans ces régions remotes. Le second objet étoit à donner une participation de commerce de l'Amérique à la France, l'Espagne, et le Portugal, autant qu'une telle participation ne seroit incompatible avec les intérêts communs et sans rivalité de l'Amérique Angloise et de l'Angleterre.

Le troisième objet étoit l'ajustement des Privilèges contestés des Amêricains sur des principes justes et honorables pour eux. Lord Rocheford étoit pour lors Secrétaire d'Etat. Il me disoit que la première personne à qui il communiquoit ce projet étoit le feu Prince de Mazerano Ambassadeur d'Espagne, et que, quoique vieux et malade, il se leva, l'embrassa: et dit, *ah! Milord, quel Dieu vous a inspiré?* Lord Rocheford le communiquoit aussi à un de ses amis qui étoit alors et est à presént un des ministres du Roy de la Grande Bretagne, qui l'approuvoit beaucoup: mais bientôt après, Lord Rocheford quittoit le ministère, se retirpit à la Campagne, et par cet accident le projet n'étoit pas presenté au cabinet du Roy.

J'ai donné la relation de cette anecdote, parceque je suis un des quatre ou cinq personnes qui seules en connoissent la vérité; et parce que je pense qu'il n'est pas encore trop tard pour faire revivre un projet qui sauvera un million de Chrétiens d'être faits veuves et Orphelins. Quant au premier objet d'une telle confédération, Lord Rocheford pensoit que la proposition seroit acceptée par toutes les puissances, parceque c'étoit l'intérêt de toutes de l'accepter.

Les pertes de la France daus les deux Indes dans la dernière guerre, et leurs pertes dans les Indes Orientales dans la dernière guerre, et ses pertes dans les Indes Orientales de la guerre d'à présent, où ils ont perdu en six semaines tout ce qu'ils y avoient, les pertes des Espagnols dans la guere derniére dans les deux Indes, et même le coup donné l'autre jour dans la baye de Hunduras par un jeune Capitaine avec une poignée de soldats, la facilité avec la quelle le Portugal perdit l'isle de Ste. Catherine dans le Brézil; et le malheur des armes Angloises dans l'Amérique dupuis trois ans, tout prouve, que la France, l'Espagne, le Portugal et l'Angleterre ont leurs parties tendres dans l'Amérique et dans les deux Indes, et par conséquent qu'ils ont tous un intérêt dans une mutuelle garantie de leurs possessions dans ces trois parties du Monde. Quant au second objet de la Confédération: je suis sensible que l'idée de donner une participation du commerce de l'Amérique aux autres trois nations sous la limitation que cela ne soit pas incompatible avec les intérêts communs de l'Amérique Angloise et de l'Angleterre, est une idée un peu vague, et sujette aux disputes, mais heureusement pour l'humanité il y a cinq personnes dans ces cinq pays, d'un caractére singulier, et qui les rend propres à faire là-dessus des réglements précis, et sujets à nulles disputes, qui enrichiront la France, l'Espagne et le Portugal sans appauvrir l'Angleterre et ses Colonies. Pour l'Amérique, il y a le Docteur Franklin, peut être le premier génie de l'âge présent et qui connoit bien les liaisons entre l'Amérique et l'Angleterre. Pour la France, il y a le Contrôleur-Général,* qui a été élevé dès sa jeunesse dans la pratique du commerce. Pour l'Espagne, il y a Monsieur Campomanes, qui a employé la maturité de son âge en des études qui lui donnent une superiorité en de telles discussions. Pour le Portugal, elle aura l'aide des conseils du Duc de Braganza qui a cueilli les connoissances dans presque tous les Camps, les Cours les Bibliothèques, et même les places des marchands d'Europe: et pour l'Angleterre, elle a un Ministre qui connoissant les vrais intérêts du commerce au fond ne refusera pas à l'Amérique ce qu'il vient de donner à l'Irlande. Quant au troisième objet de la confédération, l'Angleterre qui se vante tant de sa propre MAGNA CHARTA accordera avec facilité une MAGNA CHARTA aux libertés de l'Amérique. Peut être, le meilleur moyen d'abrévier cet article seroit de donner carte blanche au Dr. Franklin. Une confiance gé-

* Not to diminish from the originality of this document, neither the phraseology, grammar, or orthography, have been corrected.

* M. Necker.

séreuse est le moyen le plus sûr de s'assurer d'un homme généreux. L'Espagne a deux intérêts très solides dans le succès d'une telle confédération, et contre l'indépendance de l'Amérique Angloise. Le premier est que, si l'Amérique Angloise devenoit indépendante, l'Amérique Espagnole et ses isles seroient abîmées par la contrebande des Américains indépendants d'Angleterre. 1. L'Angleterre est liée par les traités avec l'Espagne à ne faire la contrebande. 2. Elle est liée par la peur que cette contrebande ne tirera une guerre sur elle dans l'Europe, ce qui fut l'effet dans le tems du Chevalier Robert Walpole. 3. La cherté des commodités de l'Angleterre et de l'Europe met des limitations naturelles à la quantité de contrebande.

Mais si les Américans étoient Indépendants, ils diroient qu'ils n'étoient liés par les traités des Anglois. 2. Ils ne seroient liés par la peur, parce qu'ils sont loin de l'Espagne; et s'étant défendu contre quatre-vingt-dix mille soldats et marins Anglois, ils se moqueroient des forces de l'Espagne; et 3. Le bas prix des commodités Américaines couvrira les Colonies Espagnoles de contrebande. Il y a même une cause nécessaire pour forcer les Américains, ou de faire la contrebande ou de faire la guerre sur l'Amérique Espagnole et Portugaise et leurs Iles; ils n'ont ni or, ni argent chez eux, mais ils ne peuvent cultiver leurs terres, ni faire leur commerce sans ces métaux precieux. Ils n'auroient que quatre sources dont ils pourroient les tirer. Le premier est le commerce avec l'Europe; le second, pensions de France et d'Espagne; le troisième, la contrebande avec les Provinces d'Espagne et de Portugal dans le nouveau Monde; et le quatrième, la guerre dans ces provinces. Autant que les Américains continuent dans un état que les Anglois appellent une Rebellion, leur commerce avec l'Europe sera interrompu par les Corsaires Anglois; ainsi ils ne tireront que très peu de métaux précieux de cette première source.

Les pensions de la France et de l'Espagne ne seroient qu'une bagatelle pour soutenir l'agriculture et les manufactures d'un si vaste pays. Ils n'auroient donc aucune ressource pour les métaux précieux, que dans la contrebande ou les guerres avec les provinces Espagnoles et Portugaises. Pour empêcher cette contrebande, les traités de confédération pourroient faire des provisions contre la contrebande et des Anglois et des Américains. C'est un point délicat pour un Anglois à suggérer les moyens; mais si les deux nations vouloient sincèrement la paix, je pourrois dans un quart-d'heure suggérer des moyens infaillibles. Il y a un autre intérêt que l'Espagne a contre l'indépendance des Américains et par conséquent pour le traité de confédération qui est peut-être encore plus grand. Les Américains ne pourroient voler avec leurs voiles partout, feroient des établissements dans la Nouvelle Zelande, les Isles d'Otahiti, ou quelques autres Isles dans la Mer du Sud; et même les Anglois, les François, les Portugais, et les Hollandois dans les mers des Indes Orientales, étant indépendants, nul traité ne les empêchera de faire de tels établissements: ils pourroient les faire selon les droits des gens. Le Capitaine Cook dit dans son dernier voyage imprimé, qu'il y a 47,000 gens de mer dans les seules Isles d'Otahiti, et le Capitaine Wallis qui faisoit la découverte de ces Isles, m'a dit à Lisbonne, il y a quelques jours, que les habitans d'Otahiti montoient au haut des mâts Anglois et couvroient par les morceaux du bois croissant les mâts auxquels les voiles sont attachées, aussi bien, en trois jours, que les marins Anglois; et il me donnoit deux raisons pour cela. La première étoit que, vivant de poisson, tous les habitans sont gens de mer, et le second, que les peuples qui ne portent que des souliers sont toujours plus propres pour monter les parties supérieures des vaisseaux. Le Capitaine Cook aussi, dans son voyage imprimé, donne une description dans la Nouvelle Zélande d'une poste pour une flotte et une ville qui pouvoit en quelques semaines être faite imprenable: et on n'a qu'a regarder la forme des Isles de la Mer du Sud dans les estampes qui en ont été faites, pour se satisfaire que ces Isles sont pleines de postes imprenables. Je me montre aussi bon ami à l'Espagne, à la France, au Portugal, et à la Hollande qu' à l'Angleterre, quand je développe l'idée suivante, qui a peut-être échappe aux autres. Autrefois on ne pouvoit aller avec sureté aux Mers du Sud, que dans le mois de Décembre et de Janvier, et par les terribles latitudes autour du Cap Horn: mais les découvertes du Capitaine Cook et des autres Anglois ont nouvellement demontré qu'on y peut aller par le Cap-de-Bonne-Espérance, dans tous les mois, par les belles latitudes du Cap-de-Bonne-Espérance et de la Nouvelle Zélande, et dans presque le même espace de tems, l'un étant un voyage de quatre mois et l'autre de cinq, parce que le même vent d'ouest qui souffle presque toute l'anée dans les autres latitudes et qui retarde les vaisseaux en passant par le Cap Horn, les porte avec rapidité par le Cap-de-Bonne-Espérance et la Nouvelle Zélande; de-là il suit, que quand les Américains querelleront avec les Espagnols peut être sur le chapitre de contrebande, ils enverront leurs vaisseaux sur les côtes de Chili de leurs établissements et dans les Mers du Sud par les latitudes de la Nouvelle Zélande, et par les vents d'ouest qui soufflent toujours dans ces latitudes, ce qui n'est qu'un voyage de cinq Semaines. Car le Capitaine Cook dans un voyage, et le Capitaine Fourneaux dans un autre, alloient de la Nouvelle Zélande au Cap Horn en moins de tems, et le journal des vents annexé au voyage du Capitaine

Cook, montre que les vents d'ouest dans ces latitudes sont au vent d'est dans la proportion de dix à un. Quand leurs vaisseaux seront sur les côtes du Chili, ils prendront avantage du vent de terre qui souffle éternellement du Sud, au Nord pour les porter à suivre les côtes du Chili et du Pérou. Le vent le portera dans quatorze jours jusqu'à la Baye de Panama, et dans le cours de ce voyage ils ravageront les côtes et feront prises de Vaisseaux partout. La force navale de l'Espagne à Lima ne pourra pas les empêcher, parce que le même vent du Sud qui poussera les Américains en avant, rendra les flottes d'Espagne incapables d'aller à leur recontre. De la Baye de Panama ils retourneront par le grand vent des Tropiques de l'est à l'ouest, qui ne change jamais, et à leurs établissements dans les Mers du Sud, ou à vendre leurs prises dans les Mers de la Chine ou de l'Inde ; d'où ils retourneront encore peut-être avec de nouveaux vaisseaux et de nouveaux équipages des hommes, faire la répétition de leurs ravages. Leurs retours seront encore par la Nouvelle Zélande, venant des Indes ou par la latitude de 40 Nord, venant de la Chine, et dans ce dernier cas ils tomberont sur le Méxique et prenant avantage des vents de terre qui soufflent toujours du Nord jusqu'à la Baye de Panama, ils ravageront le Mexique comme auparavant ils avoient ravagé le Chili et Pérou.

De la Baye de Panama, ils retourneront par le grand vent du Tropique, ou chez eux dans les Mers du Sud, ou aux Mers de l'Asie à renouveller une guerre insultante, tourmentante et sans remède. De l'autre côté, quand ils sont en guerre avec l'Angleterre, la France, le Portugal, ou la Hollande, ils tourneront en arrière de leurs établissements dans les Mers du Sud sur les Indes Orientales de l'Angleterre, la France, le Portugal ou la Hollande. Ils auront deux grandes routes à aller et à retourner ; l'une à l'ouest de la Nouvelle Hollande et l'autre par les Isles entre la Chine et la Nouvelle Hollande : et dans cette dernière route, ils auront autant de routes qu'il y a d'Isles, d'où il suit qu'il sera presqu'impossible à attrapper leurs vaisseaux, ou en allant, ou en revenant. Toutes ces conséquences pourroient être empêchées dans le traité de confédération que Lord Rocheford proposoit ; dans ce traité ou pourroit stipuler que ces Isles appartiendront pour toujours à leurs anciens habitans ; car assurément la nation qui la première en prendra possession commandera le commerce des Mers du Sud et des Mers d'Asie. L'Europe voulant faire les Américains indépendants, est dans la situation d'un homme qui dort sur la glace et n'est pas sensible que la glace se dégèle, et pour cette raison, pour donner plus de poids à la considération, on pourroit inviter la Hollande et le Danemark qui ont des intérêts dans tous les deux nouveaux mondes, d'être parties contractantes à ces articles du traité, qui regardent la garantie mutuelle. La raison pourquoi les traités sont rompus si souvent est qu'ils ne font pas provision pour les intérêts réciproques pour l'avenir des nations contractantes. Les seuls que je connoisse qui font attention à cet objet sont les traités entre le Portugal et l'Angleterre, par lesquels le Portugal gagne une préférence pour la vente de ses vins en Angleterre et l'Angleterre gagne une préférence pour la vente de ses draps en Portugal : la conséquence est qu'il n'y a jamais eu, et, en apparence, il n'y aura jamais une guerre entre le Portugal et l'Angleterre. Il ne seroit pas difficile, ou dans la même considération générale, ou par les traités séparés de commerce entre l'Angleterre d'un côté, et les trois royaumes, l'Espagne, le Portugal et la France respectivement des autres côtés, de servir infiniment les intérêts de commerce de tous les trois dans leurs liaisons avec l'Angleterre. Comme l'Espagne a les vins, l'huile, les fruits, le sel, les laines fines et quelques autres articles que l'Angleterre n'a pas, et comme l'Angleterre a le fer et le Charbon dans les mêmes champs pour ses manufactures de fer, qu'elle a par l'humidité de son climat la laine longue pour les draps d'un prix bas, qu'elle a l'étain, le poisson, et quelques autres articles que l'Espagne n'a pas, la conséquence est que, quand l'Angleterre est riche, elle achetera plus des articles de l'Espagne, et quand l'Espagne est riche, elle achetera plus des articles d'Angleterre, et par conséquent que c'est impossible pour l'un à s'enrichir sans enrichir l'autre. Le même raisonnement s'applique aux liaisons naturelles entre l'Angleterre et le Portugal. Il y a même une liaison naturelle entre l'Angleterre et la France sur beaucoup d'articles de commerce, si la jalousie des foux et dens gens mal instruits ne l'interrompoit perpétuellement. Je l'entendu d'une main sûre, que si l'Abbé Terray avoit continué dans le ministère de la France, il y auroit eu un tarif entre la France et l'Angleterre, pour l'entrée, sur des conditions plus favorables, des vins et des articles des modes d'une nation, et les manufactures de fer et des bleds de l'autre ; et l'Angleterre pourroit avoir procuré le consentement du Portugal pour la dimunition de son commerce de vins avec l'Angleterre, par d'autres dédommagemens. L'Angleterre, en faveur de la France, l'Espagne et le Portugal pouvoit même permettre l'exportation de ses laines payant un droit à l'exportation, sans se nuire.

L'exportation de superfluité de laine feroit du bien aux propriétaires des terres en Angleterre, au Roy en lui donnant une nouvelle taxe et à ses trois nations étrangères en leur donnant un article nécessaire pour leurs manufactures.

Malheur pour l'humanité ! L'Abbé Ter-

ray n'est p us: mais bonheur pour l'humanité, le Docteur Franklin, le Contrôleur-Général de la France, Mr. Campomanes, le Duc de Braganza, et le Lord North sont tous encore en vie.

C'est le Roy d'Espagne et le Comte de Florida Blanca qui peuvent mettre tous les cinq en mouvement. Pour moi je n'ai nulle autorité des ministres Anglois à présenter ce projet, mais vivant en amitié avec la plupart d'eux et avec les amis des autres, je suis sûr qu'il y a des sentiments dans ce mémoire qui sont les leurs. J'avoue que je reçu une lettre en Portugal, quatorze jours avant que je partisse pour l'Espagne, de Milord Rocheford, qui n'est pas à cette heure dans le ministère, mais qui entêté d'un projet qui lui fait tant d'honneur, me conseilloit de tâter le poux sur la possibilité de le faire réussir:

Et que j'ai une lettre sur le même sujet, du Duc de Braganza qui entroit dans les vues de projet de Milord Rocheford, non pas en politique, mais en ami de l'humanité.

Encouragé par de tels hommes et encore plus par mon propre cœur, j'écris à un des ministres du Roy d'Angleterre que si je ne trouvois pas les esprits trop échauffés et si je ne trouvois pas que je ne donnois pas offense, j'avois intention de faire justice au projet de Milord Rocheford et en Espagne et en France, et je le prie de m'envoyer une réponse à Paris, si le ministère d'Angleterre approuvoit ou désapprouvoit ce que j'allois faire. Je n'ai qu'à ajouter que mes vues étant à unir et non à séparer les nations, je n'ai nulle objection que les ministres de la France et le Docteur Franklin ayent chacun un exemplaire de ce mémoire.

A true Copy from the Original.
Attest. WM. CARMICHAEL,
Secretary of the American Legation at Madrid.

On Human Vanity.—From the Pennsylvania Gazette. Dec. 4, 1735.

Mr. Franklin,—Meeting with the following curious little piece, the other day, I send it to you to republish, as it is now in very few hands. There is something so elegant in the imagination, conveyed in so delicate a style, and accompanied with a moral so just and elevated, that it must yield great pleasure and instruction to every mind of real taste and virtue.

Cicero, in the first of his Tusculan questions, finely exposes the vain judgment we are apt to form, of the duration of human life compared with eternity. In illustrating this argument, he quotes a passage of natural history from Aristotle, concerning a species of insects on the banks of the river Hypanis, that never outlive the day in which they are born.

To pursue the thought of this elegant writer, let us suppose one of the most robust of these *Hypanians*, so famed in history, was in a manner coeval with time itself; that he began to exist at the break of day, and that from the uncommon strength of his constitution, he has been able to show himself active in life, through the numberless minutes of ten or twelve hours. Through so long a series of seconds, he must have acquired vast wisdom in his way, from observation and experience.

He looks upon his fellow-creatures, who died about noon, to be happily delivered from the many inconveniencies of old age; and can perhaps recount to his great grandson, a surprising tradition of actions, before any records of their nation were extant. The young swarm of Hypanians, who may be advanced one hour in life; approach his person with respect, and listen to his improving discourse. Every thing he says will seem wonderful to their short-lived generation. The compass of a day will be esteemed the whole duration of time; and the first dawn of light will, in their chronology, be styled the great era of their creation.

Let us now suppose this venerable insect, this *Nestor* of *Hypania* should, a little before his death, and about sun-set, send for all his descendants, his friends, and his acquaintances out of the desire he may have to impart his last thoughts to them, and to admonish them, with his departing breath. They meet, perhaps, under the spacious shelter of a mushroom; and the dying sage addresses himself to them after the following manner.

"Friends and fellow-citizens! I perceive the longest life must however end: the period of mine is now at hand: neither do I repine at my fate, since my great age is become a burden to me; and there is nothing new to me under the sun: the changes and revolutions I have seen, in my country; the manifold private misfortunes to which we are all liable; the fatal diseases incident to our race, have abundantly taught me this lesson: that no happiness can be secure or lasting which is placed in things that are out of our power—Great is the uncertainty of life!—A whole brood of our infants have perished in a moment, by a keen blast!—Shoals of our straggling youth, have been swept into the ocean by an unexpected breeze!——What wasteful desolation have we not suffered from the deluge of a sudden shower!—Our strongest holds are not proof against a storm of hail, and even a dark cloud damps the very stoutest heart.

"I have lived in the first ages, and conversed with insects of a larger size and stronger make, and I must add, of greater virtue than any can boast of in the present generation. I must conjure you to give yet further credit to my latest words when I assure you, that yonder sun, which now appears westward, be-

yond the water, and seems not to be far distant from the earth, in my remembrance stood in the middle of the sky, and shot his beams directly down upon us. The world was much more enlightened in those ages, and the air much warmer. Think it not dotage in me, if I affirm, that glorious being moves: I saw his first setting out in the east, and I began my race of life, near the time when he began his immense career. He has for several ages advanced along the sky with vast heat and unparalleled brightness, but now by his declination and a sensible decay, more especially of late, in his vigour, I foresee, that all nature must fall in a little time, and that the creation will lie buried in darkness, in less than a century of minutes.

"Alas! my friends, how did I once flatter myself with the hopes of abiding here for ever; how magnificent are the cells which I hollowed out for myself: what confidence did I repose in the firmness and spring of my joints, and in the strength of my pinions! *But I have lived enough to nature, and even to glory.* Neither will any of you, whom I leave behind, have equal satisfaction in life, in the dark declining age which I see is already began."

Thus far this agreeable unknown writer, too agreeable we may hope, to remain always concealed; the fine allusion to the character of *Julius Cæsar*, whose words he has put into the mouth of this illustrious son of *Hypanis*, is perfectly just and beautiful, and aptly points out the moral of this inimitable piece, the design of which would have been quite perverted, had a virtuous character, a *Cato* or a *Cicero*, been made choice of, to have been turned into ridicule. Had this *life of a day* been represented as employed in the exercise of virtue, it would have had equal dignity with a life of any limited duration; and according to the exalted sentiments of Tully, would have been preferable to an immortality filled with all the pleasures of sense, if void of those of a higher kind: but as the views of this vain-glorious insect were confined within the narrow circle of his own existence, as he only boasts the magnificent cells he had built, and the length of happiness he had enjoyed, he is the proper emblem of all such insects of the human race, whose ambition does not extend beyond the like narrow limits; and notwithstanding the splendour they appear in at present, they will no more deserve the regard of posterity than the butterflies of the last spring. In vain has history been taken up in describing the numerous swarms of this mischievous species which has infested the earth in the successive ages: now it is worth the inquiry of the virtuous, whether the *Rhine* or the *Adige* may not perhaps swarm with them at present, as much as the banks of *Hypanis*; or whether that silver rivulet the *Thames*, may not show a specious mole-hill, covered with inhabitants of the like dignity and importance. The busy race of being attached to these fleeting enjoyments are indeed all of them engaged in the pursuit of happiness: and it is owing to their imperfect notions of it, that they stop so far short in their pursuit. The present prospect of pleasure seems to bound their views, and the more distant scenes of happiness, when what they now propose shall be attained, do not strike their imagination. It is a great stupidity, or thoughtlessness, not to perceive, that the happiness of rational natures is inseparably connected with immortality. Creatures only endowed with sensation, may in a low sense, be reputed happy, so long as their sensations are pleasing; and if these pleasing sensations are commensurate with the time of their existence, this measure of happiness is complete. But such beings as are endowed with *thought* and *reflection*, cannot be made happy by any limited term of happiness, how great soever its duration may be. The more exquisite and more valuable their enjoyments are, the more painful must be the thought that they are to have an end; and this pain of expectation must be continually increasing the nearer the end approaches. And if these beings are themselves immortal, and yet insecure of the continuance of their happiness, the case is far worse, since an eternal void of delight, if not to say a state of misery, must succeed. It would here be of no moment, whether the time of their happiness were measured by *days* or *hours*, by *months* or *years*, or by *periods* of the most immeasurable length: these swiftly flowing streams bear no proportion to that ocean of infinity, where they must finish their course. The longest duration of finite happiness avails nothing, when it is past: nor can the memory of it have any other effect than to renew a perpetual pining after pleasures never to return, and since virtue is the only pledge and security of a happy immortality, the folly of sacrificing it to any temporal advantages, how important soever they may appear, must be infinitely great, and cannot but leave behind it an eternal regret.

Note.—The reader familiar with the happy views of moral good which distinguishes the writings of Dr. Franklin above all the writers of his age, cannot fail to perceive in this beautiful production, the first conceptions, which were amplified and digested into the allegory of the Ephemeron, which is to be found in another part of this edition; addressed to Madam Brillon.—*Editor.*

On True Happiness.—From the Pennsylvania Gazette, Nov: 20, 1735.

The desire of happiness is in general so natural, that all the world are in pursuit of it; all have this one end solely in view, though they take such different methods to attain it, and are so much divided in their notions of what it consists of.

As evil can never be preferred, and though evil is often the effect of our own choice, yet we never desire it, but under the appearance of an imaginary good.

Many things we indulge ourselves in, may be considered by us as evils; and yet be desirable: but then, they are only considered as evils in their effects and consequences, not as evils at present, and attended with immediate misery.

Reason represents things to us, not only as they are at present, but as they are in their whole nature and tendency: passion only regards them in the former light; when this governs us, we are regardless of the future, and are only affected by the present.

It is impossible for us ever to enjoy ourselves rightly, if our conduct be not such as to preserve the harmony and order of our faculties, and the original frame and constitution of our minds: all true happiness, as all that is truly beautiful, can only result from order.

Whilst there is a conflict betwixt the two principles of *passion* and *reason*, we must be miserable, in proportion to the ardour of the struggle, and when the victory is gained, and reason is so far subdued, as seldom to trouble us with its remonstrances, the happiness we have then attained, is not the happiness of our rational nature, but the happiness only of the inferior and sensual part of us; and consequently a very low and imperfect happiness, compared with that which the other would have afforded us.

If we reflect upon any one passion and disposition of mind abstracted from virtue, we shall soon see the disconnexion between that and true solid happiness; it is of the very essence, for instance, of envy to be uneasy and disquieted: pride meets with provocations and disturbances upon almost every occasion: covetousness is ever attended with solicitude and anxiety: ambition has its disappointments to sour us, but never the good fortune to satisfy us; its appetite grows the keener by indulgence, and all we can gratify it with at present, serves but the more to inflame its insatiable desires.

The passions, by being too much conversant with earthly objects, can never fix in us a proper composure, and acquiescence of mind. Nothing but an indifference to the things of this world, an entire submission to the will of Providence here, and a well-grounded expectation of happiness hereafter, can give us a true satisfactory enjoyment of ourselves. Virtue is the best guard against the many unavoidable evils incident to us; nothing better alleviates the weight of the afflictions, or gives a truer relish of the blessings of human life.

What is without us has not the least connexion with happiness, only so far as the preservation of our lives and health depends upon it: health of body, though so far necessary that we cannot be perfectly happy without it, is not sufficient to make us happy of itself.—Happiness springs immediately from the mind: health is but to be considered as a condition or circumstance, without which this happiness cannot be tasted pure and unabated.

Virtue is the best preservative of health, as it prescribes temperance, and such a regulation of our passions as is most conducive to the well being of the animal economy. So that it is at the same time the only true happiness of the mind, and the best means of preserving the health of the body.

If our desires are for the things of this world, they are never to be satisfied. If our great view is upon those of the next, the expectation of them is an infinitely higher satisfaction than the enjoyment of those of the present.

There is no true happiness then but in a virtuous and self-approving conduct; unless our actions will bear the test of our sober judgments and reflections upon them, they are not the actions, and consequently not the happiness of a rational being.

On Self-Denial.—From the Pennsylvania Gazette, Feb. 18, 1734.

It is commonly asserted, that *without self-denial there is no virtue*, and that the greater the self-denial is, the greater is the virtue.

If it were said, that he who cannot deny himself any thing he inclines to, though he knows it will be to his hurt, has not the virtue of resolution or fortitude, it would be intelligible enough; but as it stands, the proposition seems obscure or erroneous.

Let us consider some of the virtues singly.

If a man has no inclination to wrong people in his dealings; if he feels no temptation to it, and therefore never does it, can it be said, that he is not a just man? if he is a just man, has he not the virtue of justice?

If to a certain man, idle diversions have nothing in them that is tempting, and therefore he never relaxes his application to business for their sake, is he not an industrious man; or has he not the virtue of industry?

I might in like manner instance in all the rest of the virtues; but to make the thing short, as it is certain, that the more we strive against the temptation to any vice, and practise the contrary virtue, the weaker will that temptation be, and the stronger will be that habit; till at length the temptation hath no force, or entirely vanishes: does it follow from thence, that in our endeavours to overcome vice, we grow continually less and less virtuous, till at length we have no virtue at all?

If self-denial be the essence of virtue, then it follows, that the man who is naturally tem-

berate, just, &c., is not virtuous, but that in order to be virtuous, he must, in spite of his natural inclinations, wrong his neighbours, and eat and drink, &c., to excess.

But, perhaps it may be said, that by the word *virtue*, in the above assertion, is meant *merit*, and so it should stand; thus without self-denial there is no merit; and the greater the self-denial the greater the merit.

The self-denial here meant must be, when our inclinations are towards vice, or else it would still be nonsense.

By merit is understood desert; and when we say a man merits, we mean that he deserves praise or reward.

We do not pretend to merit any thing of God, for he is above our services, and the benefits he confers on us are the effects of his goodness and bounty.

All our merit then is with regard to one another, and from one to another.

Taking then the proposition as it stands—

If a man does me a service, from a natural benevolent inclination, does he deserve less of me than another, who does me the like kindness against his inclination?

If I have two journeymen, one naturally industrious, the other idle, but both perform a day's work equally good, ought I to give the latter the most wages?

Indeed lazy workmen are commonly observed to be more extravagant in their demands than the industrious; for if they have not more for their work, they cannot live as well as the industrious. But though it be true to a proverb, that *lazy folks take the most pains*, does it follow that they deserve the *most money?* If you were to employ servants in affairs of trust, would you pay more wages to one you knew was naturally honest, than for one naturally roguish, but who had lately acted honestly: for currents whose natural channels are dammed up, till a new course is by time worn sufficiently deep, and become natural, are apt to break their banks. If one servant is more valuable than another, has he not more merit than the other, and yet this is not on account of superior self-denial.

Is a patriot not praiseworthy, if public spirit is natural to him?

Is a pacing horse less valuable for being a natural pacer?

Nor in my opinion has any man less merit for having in general naturally virtuous inclinations.

The truth is, that temperance, justice, charity, &c., are virtues whether practised with or against our inclinations; and the man who practises them, merits our love and esteem: and self-denial is neither good nor bad, but as it is applied. He that denies a vicious inclination, is virtuous in proportion to his resolution; but the most perfect virtue is above all temptation; such as the virtue of the saints in heaven: and he who does any foolish, indecent, or wicked thing, merely because it is contrary to his inclination, like some mad enthusiasts I have read of, who ran about in public naked, under the notion of taking up the cross, is not practising the reasonable science of virtue, but is lunatic.

Newcastle, Feb. 5.

Rivalship in Almanac making.—From Poor Richard's Almanac, 1742.

COURTEOUS READER,—This is the ninth year of my endeavours to serve thee in the capacity of a calendar-writer. The encouragement I have met with must be ascribed, in a great measure, to your charity, excited by the open, honest declaration I made of my poverty at my first appearance. This my brother *Philomaths* could, without being conjurers discover; and *Poor Richard's* success, has produced ye a *Poor Will*, and a *Poor Robin*; and no doubt, *Poor John*, &c., will follow, and we shall all be, *in name*, what some-folks say we are already in *fact*, a parcel of *poor almanac makers*. During the course of these nine years, what buffetings have I not sustained! The fraternity have been all in arms. Honest *Titan*, deceased, was raised, and made to abuse his old friend. Both authors and printers were angry. Hard names, and many, were bestowed on me. *They denied me to be the author of my own works;* declared there never was any such person; asserted that I was dead sixty years ago; prognosticated my death to happen within a twelvemonth: with many other malicious inconsistencies, the effects of blind passion, envy at my success; and a vain hope of depriving me, dear reader, of thy wonted countenance and favour. —*Who knows him?* they cry: *Where does he live?*—But what is that to them? If I delight in a private life, have they any right to drag me out of my retirement? I have good reasons for concealing the place of my abode. It is time for an old man, as I am, to think of preparing for his great remove. The perpetual teasing of both neighbours and strangers, to calculate nativities, give judgments on schemes, and erect figures, discover thieves, detect horse-stealers, describe the route of runaways and strayed cattle; the crowd of visiters with a thousand trifling questions; *Will my ship return safe? Will my mare win the race? Will her next colt be a pacer? When will my wife die? Who shall be my husband? and HOW LONG first? When is the best time to cut hair, trim cocks, or sow salad?* These and the like impertinences I have now neither taste nor leisure for. I have had enough of them. All that these

angry folks can say, will never provoke me to tell them where I live—I would eat my nails first.

My last adversary is *J. J——n*, philomat. who *declares and protests* (in his preface, 1741) that the *false prophecy put in my almanac, concerning him, the year before, is altogether* false and untrue: *and that I am one of Baal's false prophets.* This *false, false prophecy* he speaks of, related to his reconciliation with the church of Rome; which, notwithstanding his declaring and protesting, is, I fear, too true. Two things in his elegiac verses confirm me in this suspicion. He calls the first of November *All-Hallows day.* Reader, does not this smell of popery? Does it in the least savour of the pure language of Friends? But the plainest thing is, his adoration of saints, which he confesses to be his practice, in these words, page 4.

When any trouble did me befall,
To my dear *Mary* then I would call:

Did he think the whole world were so stupid as not to take notice of this? So ignorant as not to know, that all catholics pay the highest regard to the *Virgin Mary?* Ah! friend *John*, we must allow you to be a poet, but you are certainly no protestant. I could heartily wish your religion were as good as your verses. RICHARD SAUNDERS.

The Waste of Life.

ANERGUS was a gentleman of a good estate, he was bred to no business, and could not contrive how to waste his hours agreeably; he had no relish for any of the proper works of life, nor any taste at all for the improvements of the mind; he spent generally ten hours of the four-and-twenty in his bed; he dozed away two or three more on his couch, and as many were dissolved in good liquor every evening, if he met with company of his own humour. Five or six of the rest he sauntered away with much indolence: the chief business of them was to contrive his meals, and to feed his fancy before-hand, with the promise of a dinner and supper; not that he was so very a glutton, or so entirely devoted to appetite; but chiefly because he knew not how to employ his thoughts better, he let them rove about the sustenance of his body. Thus he had made a shift to wear off ten years since the paternal estate fell into his hands: and yet according to the abuse of words in our day, he was called a man of virtue, because he was scarce ever known to be quite drunk, nor was his nature much inclined to lewdness.

One evening as he was musing along, his thoughts happened to take a most unusual turn, for they cast a glance backward, and began to reflect on his manner of life. He bethought himself what a number of living beings had been made a sacrifice to support his carcase, and how much corn and wine had been mingled with those offerings. He had not quite lost all the arithmetic that he learned when he was a boy, and he set himself to compute what he had devoured since he came to the age of man.

"About a dozen feathered creatures, small and great, have one week with another (said he) given up their lives to prolong mine, which in ten years amounts to at least six thousand.

"Fifty sheep have been sacrificed in a year, with half a hecatomb of black cattle, that I might have the choicest part offered weekly upon my table. Thus a thousand beasts out of the flock and the herd have been slain in ten years time to feed me, besides what the forest has supplied me with. Many hundreds of fishes have in all their varieties, been robbed of life for my repast, and of the smaller fry as many thousands.

"A measure of corn would hardly afford fine flour enough for a month's provision, and this arises to above six score bushels; and many hogsheads of ale and wine, and other liquors, have passed through this body of mine, this wretched strainer of meat and drink.

"And what have I done all this time for God or *man?* What a vast profusion of good things upon an useless life, and a worthless liver! There is not the meanest creature among all these which I have devoured, but hath answered the end of its creation better than I. It was made to support human nature, and it hath done so. Every crab and oyster I have eat, and every grain of corn I have devoured, hath filled up its place in the rank of beings with more propriety and honour than I have done: O shameful waste of life and time!"

In short, he carried on his moral reflections with so just and severe a force of reason, as constrained him to change his whole course of life, to break off his follies at once, and to apply himself to gain some useful knowledge, when he was more than thirty years of age; he lived many following years, with the character of a worthy man, and an excellent Christian; he performed the kind offices of a good neighbour at home, and made a shining figure as a patriot in the senate-house, he died with a peaceful conscience, and the tears of his country were dropped upon his tomb.

The world, that knew the whole series of his life, stood amazed at the mighty change. They beheld him as a wonder of reformation, while he himself confessed and adored the divine power and mercy, which had transformed him from a brute to a man.

But this was a single instance; and we may almost venture to write MIRACLE upon it. Are there not numbers of both sexes among

our young gentry, in this degenerate age, whose lives thus run to utter waste, without the least tendency to usefulness.

When I meet with persons of such a worthless character as this, it brings to my mind some scraps of Horace,

Nos numerus sumus, et fruges consumere nati.
——————Alcinoique Juventus
Cui pulchrum fuit in Medios dormire dies, &c.

PARAPHRASE.

There are a number of us creep
Into this world, to eat and sleep;
And know no reason why they're born
But merely to consume the corn,
Devour the cattle, fowl, and fish,
And leave behind an empty dish:
Tho' crows and ravens do the same,
Unlucky birds of hateful name;
Ravens or crows might fill their places,
And swallow corn and carcasses.
Then, if their tomb-stone when they die,
Ben't taught to flatter and to lie,
There 's nothing better will be said,
Than that the've eat up all their bread,
Drank up all their drink and gone to bed.

There are other fragments of that heathen poet, which occur on such occasions; one in the first of his satires, the other in the last of his epistles, which seem to represent life only as a season of luxury.

——Exacto contentus tempore vitæ
Cedat uti conviva satur——
Lusisti satus, edisti satis atque bibisti;
Tempus abire tibi.

Which may be thus put into English.

Life's but a feast; and when we die
Horace would say, if he were by,
Friend, thou hast eat and drank enough,
'Tis time now to be marching off:
Then like a well-fed guest depart,
With cheerful looks, and ease at heart,
Bid all your friends good night, and say,
You've done the business of the day.

DIALOGUE I.

Between Philocles and Horatio meeting accidentally in the fields, concerning Virtue and Pleasure.—From the Pennsylvania Gazette, No. 84, June 23, 1730.

Philocles. My friend Horatio! I am very glad to see you; prithee how came such a man as you alone? and musing too? What misfortune in your pleasures has sent you to philosophy for relief.

Horatio. You guess very right, my dear Philocles: we pleasure-hunters are never without them; and yet, so enchanting is the game, we cannot quit the chace. How calm and undisturbed is your life, how free from present embarrassments and future cares; I know you love me, and look with compassion upon my conduct: show me then the path which leads up to that constant and invariable good, which I have heard you so beautifully describe, and which you seem so fully to possess.

Phil. There are few men in the world I value more than you, Horatio! for amidst all your foibles, and painful pursuits of pleasure, I have oft observed in you an honest heart, and a mind strongly bent towards virtue. I wish, from my soul, I could assist you in acting steadily the part of a reasonable creature: for, if you would not think it a paradox, I should tell you I love you better than you do yourself.

Hor. A paradox indeed! better than I do myself! when I love my dear self so well, that I love every thing else for my own sake.

Phil. He only loves himself well, who rightly and judiciously loves himself.

Hor. What do you mean by that, Philocles? You men of reason and virtue are always dealing in mysteries, though you laugh at them when the church makes them. I think he loves himself very well and very judiciously too; as you call it, who allows himself to do whatever he pleases.

Phil. What, though it be to the ruin and destruction of that very self which he loves so well! That man alone loves himself rightly, who procures the greatest possible good to himself through the whole of his existence; and so pursues pleasure as not to give for it more than it is worth.

Hor. That depends all upon opinion. Who shall judge what the pleasure is worth? Suppose a pleasing form of the fair kind strikes me so much, that I can enjoy nothing without the enjoyment of that one object. Or, that pleasure in general is so favourite a mistress, that I will take her as men do their wives, for better, for worse; minding no consequences, nor regarding what is to come. Why should I not do it?

Phil. Suppose, Horatio! that a friend of yours entered into the world, about two and twenty, with a healthful vigorous body, and a fair plentiful estate of about five hundred pounds a year; and yet, before he had reached thirty, should, by following his pleasures, and not, as you say, duly regarding consequences, have run out of his estate, and disabled his body to that degree, that he had neither the means nor capacity of enjoyment left; nor any thing else to do but wisely shoot himself through the head to be at rest: what would you say to this unfortunate man's conduct? Is it wrong by opinion or fancy only? Or is there really a right and wrong in the case? Is not one opinion of life and action juster than another? Or one sort of conduct preferable to another? Or, does that miserable son of pleasure appear as reasonable and lovely a being in your eyes, as a man, who by prudently and rightly gratifying his natural passions, had preserved his body in full health and his estate entire, and enjoyed both to a good old age, and then died with a thankful heart for the good things he had received, and with an entire submission to the will of Him who first called him into being. Say, Horatio! are these men equally wise and happy?

And is every thing to be measured by mere fancy and opinion, without considering whether that fancy or opinion be right?

Hor. Hardly so neither, I think; yet sure the wise and good Author of nature could never make us to plague us. He could never give us passions, on purpose to subdue and conquer them; nor produce this self of mine, or any other self, only that it may be denied; for, that is denying the works of the great Creator himself. Self-denial then, which is what I suppose you mean by prudence, seems to me not only absurd, but very dishonourable to that supreme wisdom and goodness which is supposed to make so ridiculous and contradictory a creature, that must be always fighting with himself in order to be at rest, and undergo voluntary hardships in order to be happy: are we created sick, only to be commanded to be sound? Are we born under one law, our passions, and yet bound to another, that of reason! Answer me, Philocles, for I am warmly concerned for the honour of nature, the mother of us all.

Phil. I find, Horatio, my two characters have frighted you; so that you decline the trial of what is good, by reason: and had rather make a bold attack upon Providence; the usual way of you gentlemen of fashion, who, when, by living in defiance of the eternal rules of reason, you have plunged yourselves into a thousand difficulties, endeavour to make yourselves easy, by throwing the burden upon nature; you are, Horatio, in a very miserable condition indeed; for you say, you cannot be happy if you control your passions; and you feel yourself miserable by an unrestrained gratification of them; so that here is evil, irremediable evil either way.

Hor. That is very true, at least it appears so to me; pray what have you to say, Philocles, in honour of nature or Providence; methinks, I am in pain for her; How do you rescue her! poor lady!

Phil. This, my dear Horatio, I have to say that what you find fault with and clamour against, as the most terrible evil in the world, self-denial, is really the greatest good, and the highest self-gratification. If indeed you use the word in the sense of some weak sour moralists, and much weaker divines; you will have just reason to laugh at it; but, if you take it, as understood by philosophers, and men of sense, you will presently see her charms, and fly to her embraces, notwithstanding her demure looks, as absolutely necessary to produce even your own darling sole good, pleasure; for, self denial is never a duty, or a reasonable action, but as it is a natural means of procuring more pleasure than you can taste without it, so that this grave saint-like guide to happiness, as rough and dreadful as she has been made to appear, is in truth, the kindest and most beautiful mistress in the world.

Hor. Prithee, Philocles, do not wrap yourself in allegory and metaphor: why do you teaze me thus! I long to be satisfied, what is this philosophical self-denial; the necessity and reason of it; I am impatient, and all on fire; explain, therefore, in your beautiful natural easy way of reasoning, what I am to understand by this grave lady of yours, with so forbidding downcast looks, and yet, so absolutely necessary to my pleasures, I stand ready to embrace her; for you know, pleasure I court under all shapes and forms.

Phil. Attend then, and you will see the reason of this philosophical self-denial. There can be no absolute perfection in any creature; because every creature is derived from something of a superior existence, and dependant on that source for its own existence: no created being can be all-wise, all-good, and all-powerful, because his powers and capacities are finite and limited: consequently whatever is created must, in its own nature, be subject to error, irregularity, excess, and imperfectness. All intelligent rational agents find in themselves a power of judging what kind of beings they are: what actions are proper to preserve them; and what consequences will generally attend them; what pleasures they are formed for, and to what degree their natures are capable of receiving them. All we have to do then, Horatio, is to consider, when we are surprised with a new object, and passionately desire to enjoy it, whether the gratifying that passion be consistent with the gratifying other passion and appetites equal, if not more necessary to us. And whether it consists with our happiness to-morrow, next week, or next year; for, as we all wish to live, we are obliged, by reason, to take as much care for our future, as our present happiness, and not build one upon the ruins of the other: but, if through the strength and power of a present passion, and through want of attending to consequences, we have erred and exceeded the bounds which nature or reason have set us; we are then, for our own sakes, to refrain, or deny ourselves a present momentary pleasure. for a future, constant, and durable one; so that this philosophical self-denial is only refusing to do an action, which you strongly desire; because it is inconsistent with your health, convenience, or circumstances in the world; or, in other words, because it would cost you more than it was worth. You would lose by it, as a man of pleasure. Thus you see, Horatio, that self-denial is not only the most reasonable, but the most pleasant thing in the world.

Hor. We are just coming into town, so that we cannot pursue this argument any farther at present; you have said a great deal for us

ture, Providence and reason: happy are they who can follow such divine guides.

Phil. Horatio, good night: I wish you wise in your pleasures.

Hor. I wish, Philocles, I could be as wise in my pleasures, as you are pleasantly wise; your wisdom is agreeable; your virtue is amiable; and your philosophy the highest luxury. Adieu! thou enchanting reasoner.

DIALOGUE II.

Between Philocles and Horatio, concerning Virtue and Pleasure.—From the Pennsylvania Gazette, No. 86, July 9, 1730.

Philocles.—Dear Horatio, where hast thou been these three or four months? What new adventures have you fallen upon since I met you in these delightful all-inspiring fields, and wondered how such a pleasure-hunter as you could bear being alone?

Horatio. O Philocles! thou best of friends, because a friend to reason and virtue! I am very glad to see you: do not you remember, I told you then, that some misfortunes in my pleasures had sent me to philosophy for relief; but now I do assure you, I can, without a sigh, leave other pleasures for those of philosophy: I can hear the word reason mentioned, and virtue praised, without laughing. Do not I bid fair for conversion, think you?

Phil. Very fair, Horatio; for I remember the time when reason, virtue, and pleasure were the same thing with you: when you counted nothing good but what pleased; nor any thing reasonable but what you gained by: when you made a jest of a mind, and the pleasures of reflection; and elegantly placed your sole happiness, like the rest of the animal creation, in the gratification of sense.

Hor. I did so; but in our last conversation, when walking upon the brow of this hill, and looking down on that broad rapid river, and yon widely extended, beautifully varied plain, you taught me another doctrine: you showed me, that self-denial, which above all things I abhorred, was really the greatest good, and the highest self-gratification, and absolutely necessary to produce even my own darling sole good, pleasure.

Phil. True: I told you, that self-denial was never a duty, but when it was a natural means of procuring more pleasure, than we could taste without it: that as we all strongly desire to live, and to live only to enjoy, we should take as much care about our future as our present happiness; and not build one upon the ruins of the other: that we should look to the end, and regard consequences: and if, through want of attention, we had erred, and exceeded the bounds which nature had set us, we were then obliged, for our own sakes, to refrain, or deny ourselves a present momentary pleasure, for a future, constant, and durable good.

Hor. You have shown, Philocles, that self-denial, which weak or interested men have rendered the most forbidding, is really the most delightful and amiable, the most reasonable and pleasant thing in the world. In a word, if I understand you aright, self-denial is, in truth, self-recognizing, self-acknowledging, or self-owning. But now, my friend, you are to perform another promise; and, show me the path which leads up to that constant, durable, and invariable good, which I have heard you so beautifully describe, and which you seem so fully to possess. Is not this good of yours a mere chimera? Can any thing be constant in a world which is eternally changing! and which appears to exist by an everlasting revolution of one thing into another, and where every thing without us, and every thing within us, is in perpetual motion. What is this constant durable good, then, of yours? Prithee satisfy my soul, for I am all on fire, and impatient to enjoy her. Produce this eternal blooming goddess, with never fading charms; and see, whether I will not embrace her with as much eagerness and rapture as you.

Phil. You seem enthusiastically warm, Horatio; I will wait till you are cool enough to attend to the sober dispassionate voice of reason.

Hor. You mistake me; my dear Philocles, my warmth is not so great as to run away with my reason: it is only just raised enough to open my faculties, and fit them to receive those eternal truths, and that durable good which you so triumphantly boast of. Begin then, I am prepared.

Phil. I will, I believe; Horatio, with all your scepticism about you, you will allow that good to be constant which is never absent from you, and that to be durable, which never ends but with your being.

Hor. Yes, go on.

Phil. That can never be the good of a creature, which when present, the creature may be miserable, and when absent, is certainly so.

Hor. I think not; but pray explain what you mean: for I am not much used to this abstract way of reasoning.

Phil. I mean, all the pleasures of sense. The good of man cannot consist in the mere pleasures of sense; because, when any one of those objects which you love is absent, or cannot be come at, you are certainly miserable: and if the faculty be impaired, though the object be present, you cannot enjoy it. So that this sensual good depends upon a thousand things without and within you, and all out of your power. Can this then be the good of man? Say, Horatio, what think you, is not this a chequered, fleeting, fantastical good? Can that, in any propriety of speech, be called the good of man, which even, while he is

tasting, he may be miserable; and which, when he cannot taste, he is necessarily so? Can that be our good, which costs us a great deal of pains to obtain; which cloys in possessing; for which we must wait the return of appetite, before we can enjoy again? Or, is that our good which we can come at without difficulty; which is heightened by possession; which never ends in weariness and disappointment; and which, the more we enjoy, the better qualified we are to enjoy on?

Hor. The latter, I think; but why do you torment me thus? Philocles, show me this good immediately.

Phil. I have showed you what it is not; it is not sensual, but it is rational and moral good. It is doing all the good we can to others, by acts of humanity, friendship, generosity, and benevolence: this is that constant and durable good, which will afford contentment and satisfaction always alike, without variation or diminution. I speak to your experience now, Horatio. Did you ever find yourself weary of relieving the miserable? Or of raising the distressed into life or happiness? Or rather, do not you find the pleasure grow upon you by repetition; and that it is greater in reflection that in the act itself? Is there a pleasure upon earth to be compared with that which arises from the sense of making others happy? Can this pleasure ever be absent, or ever end but with your being? Does it not always accompany you? Doth not it lie down and rise with you, live as long as you live, give you consolation in the article of death, and remain with you in that gloomy hour, when all other things are going to forsake you, or you them?

Hor. How glowingly you paint, Philocles; methinks Horatio is amongst the enthusiasts. I feel the passion: I am enchantingly convinced; but I do not know why: overborn by something stronger than reason. Sure, some divinity speaks within me; but prithee, Philocles, give me coolly the cause, why this rational and moral good so infinitely excels the mere natural or sensual.

Phil. I think, Horatio, that I have clearly shown you the difference between merely natural or sensual good, and rational or moral good. Natural or sensual pleasure continues no longer than the action itself; but this divine or moral pleasure continues when the action is over, and swells and grows upon your hand by reflection: the one is inconstant, unsatisfying, of short duration, and attended with numberless ills; the other is constant, yields full satisfaction, is durable, and no evils preceding, accompanying, or following it. But if you inquire farther into the cause of this difference, and would know why the moral pleasures are greater than the sensual; perhaps the reason is the same, as in all other creatures, that their happiness or chief good consists in acting up to their chief faculty, or that faculty which distinguishes them from all creatures of a different species. The chief faculty in man is his reason; and consequently, his chief good; or, that which may be justly called his good consists not merely in action, but in reasonable action. By reasonable actions, we understand those actions, which are preservative of the human kind, and naturally tend to produce real and unmixed happiness; and these actions, by way of distinction, we call actions morally good.

Hor. You speak very clearly, Philocles; but, that no difficulty may remain upon your mind, pray tell me, what is the real difference between natural good and evil, and moral good and evil; for I know several people who use the terms without ideas.

Phil. That may be: the difference lies only in this, that natural good and evil, are pleasure and pain: moral good and evil, are pleasure or pain produced with intention and design. For, it is the intention only that makes the agent morally good or bad.

Hor. But may not a man, with a very good intention, do an evil action?

Phil. Yes; but then he errs in his judgment, though his design be good: if his error is invincible, or such as, all things considered, he could not help, he is inculpable; but, if it arose through want of diligence in forming his judgment about the nature of human actions, he is immoral and culpable.

Hor. I find, then, that in order to please ourselves rightly, or to do good to others morally, we should take great care of our opinions.

Phil. Nothing concerns you more; for, as the happiness or real good of men consists in right action; and right action cannot be produced without right opinion; it behoves us, above all things in this world, to take care that our own opinions of things be according to the nature of things. The foundation of all virtue and happiness is thinking rightly. He who sees an action is right, that is, naturally tending to good, and does it because of that tendency, he only is a moral man; and he alone is capable of that constant, durable, and invariable good, which has been the subject of this conversation.

Hor. How, my dear philosophical guide, shall be able to know, and determine certainly, what is right and wrong in life?

Phil. As easily as you distinguish a circle from a square, or light from darkness. Look, Horatio, into the sacred book of nature; read your own nature, and view the relation which other men stand in to you, and you to them, and you will immediately see what constitutes human happiness, and consequently, what is right.

Hor. We are just coming into town, and can say no more at present. You are my good

genius, Philocles, you have showed me what is good; you have redeemed me from the slavery and misery of folly and vice; and made me a free and happy being.

Phil. Then am I the happiest man in the world; be you steady, Horatio, never depart from reason and virtue.

Hor. Sooner will I lose my existence. Good night, Philocles.

Phil. Adieu, dear Horatio.

POOR RICHARD'S ALMANAC.

The Way to Wealth, as clearly shown in the Preface of an old Pennsylvania Almanac, intitled, Poor Richard Improved.*

COURTEOUS READER,—I have heard, that nothing gives an author so great pleasure, as to find his works respectfully quoted by others. Judge, then, how much I must have been gratified by an incident I am going to relate to you. I stopped my horse lately, where a great number of people were collected, at an auction of merchant's goods. The hour of the sale not being come, they were conversing on the badness of the times; and one of the company called to a plain clean old man, with white locks, "Pray, Father Abraham, what think you of the times? Will not these heavy taxes quite ruin the country? How shall we ever be able to pay them? What would you advise us to do?"—Father Abraham stood up, and replied, 'If you would have my advice, I will give it to you in short, "for a word to the wise is enough," as Poor Richard says.' They joined in desiring him to speak his mind, and gathering round him, he proceeded as follows:

'Friends,' says he, 'the taxes are, indeed, very heavy, and, if those laid on by the government were the only ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous to some of us. We are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our folly; and from these taxes the commissioners cannot ease or deliver us, by allowing an abatement. However, let us hearken to good advice, and something may be done for us; "God helps them that help themselves," as poor Richard says.

'1. It would be thought a hard government that should tax its people one tenth part of their time, to be employed in its service: but idleness taxes many of us much more; sloth, by bringing on diseases, absolutely shortens life. "Sloth, like rust, consumes faster than labour wears, while the used key is always bright," as poor Richard says. "But dost thou love life, then do not squander time, for that is the stuff life is made of," as poor Richard says. How much more than is necessary do we spend in sleep! forgetting, that "the sleeping fox catches no poultry, and that there will be sleeping enough in the grave," as poor Richard says.

'"If time be of all things the most precious, wasting time must be," as poor Richard says, "the greatest prodigality;" since, as he elsewhere tells us, "lost time is never found again; and what we call time enough always proves little enough:" let us then up and be doing, and doing to the purpose; so by diligence shall we do more with less perplexity. "Sloth makes all things difficult, but industry all easy; and he that riseth late, must trot all day, and shall scarce overtake his business at night; while laziness travels so slowly, that poverty soon overtakes him. Drive thy business, let not that drive thee; and early to bed, and early to rise, makes a man healthy, wealthy, and wise," as poor Richard says.

'So what signifies, wishing and hoping for better times? We may make these times better, if we bestir ourselves. "Industry need not wish, and he that lives upon hope will die fasting. There are no gains without pains; then help hands, for I have no lands," or, if I have, they are smartly taxed. "He, that hath a trade, hath an estate; and, he that hath a calling, hath an office of profit and honour," as poor Richard says; but then the trade must be worked at, and the calling well followed, or neither the estate nor the office will enable us to pay our taxes. If we are industrious, we shall never starve; for, "at the working man's house, hunger looks in, but dares not enter." Nor will the bailiff or the constable enter, for "industry pays debts, while despair increaseth them."—What though you have found no treasure, nor has any rich relation left you a legacy, "diligence is the mother of good luck, and God gives all things to industry. Then plow deep, while sluggards sleep, and you shall have corn to sell and to keep." Work while it is called to-day, for you know not how much you may be hindered to-morrow. "One to-day is worth two to-morrows," as poor Richard says; and farther, "never leave that till to-morrow, which you can do to-day." If you were a servant, would you not be ashamed that a good master should catch you idle? Are you then your own master? Be ashamed to catch yourself idle, when there is so much to be done for yourself, your family, your country, and your king. Handle your tools without mittens; remember, that, "the cat in gloves

* Dr. Franklin for many years published the Pennsylvania Almanac, called *Poor Richard* [*Saunders,*] and furnished it with various sentences and proverbs, which had principle relation to the topics of "industry, attention to one's own business, and frugality." These sentences and proverbs he collected and digested in the above preface, which were read with much avidity, and perhaps tended more to the formation of national character in America, than any other cause.

catches no mice," as poor Richard says. It is true, there is much to be done, and perhaps you are weak-handed; but stick to it steadily, and you will see great effects, for "constant dropping wears away stones; and by diligence and patience the mouse ate in two the cable; and little strokes fell great oaks."

'Methinks I hear some of you say, "must a man afford himself no leisure?" I will tell thee, my friend, what poor Richard says; "employ thy time well, if thou meanest to gain leisure; and since thou art not sure of a minute, throw not away an hour." Leisure is time for doing something useful; this leisure the diligent man will obtain, but the lazy man never; for "a life of leisure and a life of laziness are two things. Many, without labour, would live by their wits only, but they break for want of stock;" whereas industry gives comfort, and plenty, and respect. "Fly pleasures, and they will follow you. The diligent spinner has a large shift; and now I have a sheep and a cow, every one bids me good-morrow."

'II. But with our industry we must likewise be steady, settled, and careful, and oversee our own affairs with our own eyes, and not trust too much to others; for, as poor Richard says,

> "I never saw an oft-removed tree,
> Nor yet an oft-removed family,
> That throve so well as those that settled be."

And again, "three removes is as bad as a fire;" and again "keep thy shop, and thy shop will keep thee;" and again, "if you would have your business done, go, if not, send." And again,

> "He that by the plough would thrive,
> Himself must either hold or drive."

And again, "the eye of a master will do more work than both his hands;" and again, "want of care does us more damage than want of knowledge;" and again, "not to oversee workmen, is to leave them your purse open." Trusting too much to other's care is the ruin of many; for, "in the affairs of this world, men are saved, not by faith, but by the want of it;" but a man's own care is profitable; for, "if you would have a faithful servant, and one that you like, serve yourself. A little neglect may breed great mischief; for want of a nail the shoe was lost, and for want of a shoe the horse was lost, and for want of a horse the rider was lost," being overtaken and slain by the enemy; all for want of a little care about a horse-shoe nail.

'III. So much for industry, my friends, and attention to one's own business; but to these we must add frugality, if we would make our industry more certainly successful. A man may, if he knows not how to save as he gets, "keep his nose all his life to the grindstone, and die not worth a groat at last. A fat kitchen makes a lean will;" and

> "Many estates are spent in the getting,
> Since women for tea forsook spinning and knitting,
> And men for punch forsook hewing and splitting."

"If you would be wealthy, think of saving, as well as of getting. The Indies have not made Spain rich, because her outgoes are greater than her incomes."

'Away then, with your expensive follies, and you will not then have so much cause to complain of hard times, heavy taxes, and chargeable families; for

> "Women and wine, game and deceit,
> Make the wealth small, and the want great."

And farther, "what maintains one vice, would bring up two children." You may think, perhaps, that a little tea, or a little punch now and then, diet a little more costly, clothes a little finer, and a little entertainment now and then, can be no great matter; but remember, "many a little makes a mickle." Beware of little expences; "a small leak will sink a great ship," as poor Richard says; and again, "who dainties love, shall beggars prove;" and moreover, "fools make feasts, and wise men eat them."

"Here you are all got together to this sale of fineries and nick-nacks. You call them *goods*, but if you do not take care, they will prove *evils* to some of you. You expect they will be sold cheap, and perhaps they may, for less than they cost; but, if you have no occasion for them, they must be dear to you. Remember what poor Richard says, "buy what thou hast no need of, and ere long thou shalt sell thy necessaries." And again, "at a great pennyworth pause a while." He means that perhaps the cheapness is apparent only, and not real; or the bargain, by straitening thee in thy business, may do thee more harm than good. For in another place he says, "many have been ruined by buying good pennyworths." Again, "it is foolish to lay out money in a purchase of repentance;" and yet this folly is practised every day at auctions, for want of minding the almanac. Many a one, for the sake of finery on the back, have gone with a hungry belly, and half starved their families; "silks and satins, scarlet and velvets, put out the kitchen fire," as poor Richard says. These are not the necessaries of life, they can scarcely be called the conveniencies; and yet, only because they look pretty, how many want to have them! By these and other extravagancies, the genteel are reduced to poverty, and forced to borrow of those whom they formerly despised, but who, through industry and frugality, have maintained their standing; in which case it appears plainly, that "a ploughman on his legs is higher than a gentleman on his knees," as poor Richard says. Perhaps they have had a small estate left them, which they knew not the getting of; they think "it is day, and it will never be night;" that a little to be spent

out of so much is not worth minding; but "always taking out of the meal-tub, and never putting in soon comes to the bottom," as poor Richard says; and then, "when the well is dry, they know the worth of water." But this they might have known before, if they had taken his advice: "if you would know the value of money go and try to borrow some; for he that goes a borrowing goes a sorrowing," as poor Richard says; and indeed so does he that lends to such people, when he goes to get it again. Poor Dick farther advises, and says,

> "Fond pride of dress is sure a curse,
> Ere fancy you consult, consult your purse."

And again, "pride is as loud a beggar as want, and a great deal more saucy." When you have bought one fine thing, you must buy ten more, that your appearance may be all of a piece; but poor Dick says, "it is easier to suppress the first desire than to satisfy all that follow it:" and it is as truly folly for the poor to ape the rich, as for the frog to swell in order to equal the ox.

> "Vessels large may venture more,
> But little boats should keep near shore."

It is, however, a folly soon punished; for, as poor Richard says, "pride that dines on vanity, sups on contempt; pride breakfasted with plenty, dined with poverty, and supped with infamy." And, after all, of what use is this pride of appearance, for which so much is risked, so much is suffered? It cannot promote health, nor ease pain; it makes no increase of merit in the person; it creates envy, it hastens misfortune.

'But what madness must it be to *run in debt* for these superfluities! We are offered by the terms of this sale six months credit; and that perhaps has induced some of us to attend it, because we cannot spare the ready money, and hope now to be fine without it. But ah! think what you do when you run in debt; you give to another power over your liberty. If you cannot pay at the time, you will be ashamed to see your creditor, you will be in fear when you speak to him, when you will make poor, pitiful, sneaking excuses, and by degrees come to loose your veracity, and sink into base, downright lying; for, "the second vice is lying; the *first* is running debt," as poor Richard says; and again to the same purpose, "lying rides upon debt's back;" whereas a free-born Englishman ought not to be ashamed nor afraid to see or speak to any man living. But poverty often deprives a man of all spirit and virtue. "It is hard for an empty bag to stand upright. What would you think of that prince, or of that government, who should issue an edict forbidding you to dress like a gentleman or gentlewoman, on pain of imprisonment or servitude? Would you not say, that you were free, have a right to dress as you please, and that such an edict would be a breach of your privileges, and such a government tyrannical? And yet you are about to put yourself under that tyranny, when you run in debt for such dress! your creditor has authority, at his pleasure, to deprive you of your liberty, by confining you in gaol for life, or by selling you for a servant, if you should not be able to pay him. When you have got your bargain, you may, perhaps, think little of payment; but, as poor Richard says, "creditors have better memories than debtors; creditors are a superstitious sect, great observers of set-days and times." The day comes round before you are aware, and the demand is made before you are prepared to satisfy it; or, if you bear your debt in mind, the term, which at first seemed so long, will as it lessens, appear extremely short; time will seem to have added wings to his heels as well as his shoulders. "Those have a short lent, who owe money to be paid at Easter." At present, perhaps, you may think yourselves in thriving circumstances, and that you can bear a little extravagance without injury; but

> "For age and want save while you may,
> No morning sun lasts a whole day."

Gain may be temporary and uncertain, but ever, while you live, expense is constant and certain; and, "it is easier to build two chimneys than to keep one in fuel," as poor Richard says: so, "rather go to bed supperless than rise in debt."

> "Get what you can, and what you get hold,
> 'Tis the stone that will turn all your lead into gold."

And when you have got the philosopher's stone, sure you will no longer complain of bad times, or the difficulty of paying taxes.

'IV. This doctrine, my friends, is reason and wisdom: but, after all, do not depend too much upon your own industry, and frugality, and prudence, though excellent things; for they may all be blasted, without the blessing of Heaven; and therefore ask that blessing humbly, and be not uncharitable to those that at present seem to want it, but comfort and help them. Remember Job suffered, and was afterwards prosperous.

'And now, to conclude, "experience keeps a dear school, but fools will learn in no other," as poor Richard says, and scarce in that; for, it is true, "we may give advice, but we cannot give conduct:" however, remember this, "they that will not be counselled cannot be helped;" and farther, that "if you will not hear reason she will surely rap your knuckles," as poor Richard says.'

Thus the old gentleman ended his harangue. The people heard it, and approved the doctrine; and immediately practised the contrary, just as if it had been a common sermon, for the auction opened, and they began to buy extravagantly.—I found the good man had thoroughly studied my almanacs, and digested

all I had dropt on those topics during the course of twenty-five years. The frequent mention he made of me must have tired any one else; but my vanity was wonderfully delighted with it, though I was conscious, that not a tenth part of the wisdom was my own, which he ascribed to me, but rather the gleanings that I had made of the sense of all ages and nations. However, I resolved to be the better for the echo of it; and, though I had at first determined to buy stuff for a new coat, I went away, resolved to wear my old one a little longer. Reader, if thou wilt do the same, thy profit will be as great as

RICHARD SAUNDERS.

To my Friend A. B.

Advice to a Young Tradesman.—Written Anno 1748.

As you have desired it of me, I write the following hints, which have been of service to me, and may, if observed, be so to you.

Remember, that *time* is money. He, that can earn ten shillings a day by his labour, and goes abroad, or sits idle one half that day, though he spends but sixpence during his diversion or idleness, ought not to reckon *that* the only expense; he has really spent, or rather thrown away, five shillings besides.

Remember, that *credit* is money. If a man lets his money lie in my hands after it is due, he gives me the interest, or so much as I can make of it, during that time. This amounts to a considerable sum where a man has good and large credit, and makes good use of it.

Remember, that money is of a prolific generating nature. Money can beget money, and its offspring can beget more, and so on. Five shillings turned is six, turned again it is seven and three-pence, and so on till it becomes a hundred pounds. The more there is of it, the more it produces every turning, so that the profits rise quicker and quicker. He that kills a breeding sow destroys all her offspring to the thousandth generation. He that murders a crown destroys all that it might have produced, even scores of pounds.

Remember, that six pounds a year is but a groat a day. For this little sum (which may be daily wasted either in time or expense unperceived) a man of credit may, on his own security, have the constant possession and use of a hundred pounds. So much in stock, briskly turned by an industrious man, produces great advantage.

Remember this saying, "the good paymaster is lord of another man's purse." He that is known to pay punctually and exactly to the time he promises may at any time, and on any occasion, raise all the money his friends can spare. This is sometimes of great use. After industry and frugality, nothing contributes more to the raising of a young man in the world than punctuality and justice in all his dealings: therefore, never keep borrowed money an hour beyond the time you promised, lest a disappointment shut up your friend's purse for ever.

The most trifling actions that affect a man's credit are to be regarded. The sound of your hammer at five in the morning, or nine at night, heard by a creditor, makes him easy six months longer: but if he sees you at a billiard-table, or hears your voice at a tavern, when you should be at work, he sends for his money the next day; demands it before he can receive it in a lump.

It shows, besides, that you are mindful of what you owe; it makes you appear a careful as well as an honest man, and that still increases your credit.

Beware of thinking all your own that you possess, and of living accordingly. It is a mistake that many people who have credit fall into. To prevent this, keep an exact account for some time, both of your expenses and your income. If you take the pains at first to mention particulars, it will have this good effect: you will discover how wonderfully small trifling expenses mount up to large sums, and will discern what might have been, and may for the future be saved, without occasioning any great inconvenience.

In short, the way to wealth, if you desire it, is as plain as the way to market. It depends chiefly on two words, *industry* and *frugality*; that is, waste neither *time* nor *money*, but make the best use of both. Without industry and frugality nothing will do, and with them every thing. He, that gets all he can honestly, and saves all he gets (necessary expenses excepted,) will certainly become *rich*—if that Being who governs the world, to whom all should look for a blessing on their honest endeavours, doth not, in his wise providence, otherwise determine.

Necessary Hints to those that would be rich

Written Anno 1736.

The use of money is all the advantage there is in having money.

For six pounds a year you may have the use of one hundred pounds, provided you are a man of known prudence and honesty.

He, that spends a groat a day idly, spends idly above six pounds a year, which is the price for the use of one hundred pounds.

He, that wastes idly a groat's worth of his time per day, one day with another, wastes the privilege of using one hundred pounds each day.

He, that idly loses five shillings worth of time, loses five shillings, and might as prudently throw five shillings into the sea.

He, that loses five shillings, not only loses that sum, but all the advantage that might be

made by turning it in dealing, which, by the time that a young man becomes old, will amount to a considerable sum of money.

Again: he, that sells upon credit, asks a a price for what he sells equivalent to the principal and interest of his money for the time he is to be kept out of it; therefore, he that buys upon credit, pays interest for what he buys, and he, that pays ready money, might let that money out to use: so that he, that possesses any thing he bought, pays interest for the use of it.

Yet, in buying goods, it is best to pay ready money, because he that sells upon credit, expects to lose five per cent. by bad debts; therefore he charges, on all he sells upon credit, an advance, that shall make up that deficiency.

Those, who pay for what they buy upon credit, pay their share of this advance.

He, that pays ready money, escapes, or may escape, that charge.

A penny sav'd is two-pence clear,
A pin a day's a groat a year.

The way to make Money plenty in every Man's Pocket.

At this time, when the general complaint is, that "money is scarce," it will be an act of kindness to inform the moneyless how they may reinforce their pockets. I will acquaint them with the true secret of money-catching, the certain way to fill empty purses, and how to keep them always full. Two simple rules, well observed, will do the business.

First, let honesty and industry be thy constant companions; and

Secondly, spend one penny less than thy clear gains.

Then shall thy hide-bound pocket soon begin to thrive, and will never again cry with the empty belly-ache: neither will creditors insult thee, nor want oppress, nor hunger bite, nor nakedness freeze thee. The whole hemisphere will shine brighter, and pleasure spring up in every corner of thy heart. Now, therefore, embrace these rules and be happy. Banish the bleak winds of sorrow from thy mind, and live independent. Then shalt thou be a man, and not hide thy face at the approach of the rich, nor suffer the pain of feeling little when the sons of fortune walk at thy right hand: for independency, whether with little or much, is good fortune, and placeth thee on even ground with the proudest of the golden fleece. Oh, then, be wise, and let industry walk with thee in the morning, and attend thee until thou reachest the evening hour for rest. Let honesty be as the breath of thy soul, and never forget to have a penny when all thy expenses are enumerated and paid: then shalt thou reach the point of happiness, and independence shall be thy shield and buckler, thy helmet and crown; then shall thy soul walk upright, nor stoop to the silken wretch because he hath riches, nor pocket an abuse because the hand which offers it wears a ring set with diamonds.

The Handsome and Deformed Leg.

There are two sorts of people in the world, who, with equal degrees of health and wealth, and the other comforts of life, become, the one happy, and the other miserable. This arises very much from the different views in which they consider things, persons, and events; and the effect of those different views upon their own minds.

In whatever situation men can be placed, they may find conveniences and inconveniences; in whatever company, they may find persons and conversation more or less pleasing: at whatever table, they may meet with meats and drinks of better and worse taste, dishes better and worse dressed; in whatever climate, they will find good and bad weather: under whatever government, they may find good and bad laws, and good and bad administration of those laws; in whatever poem, or work of genius, they may see faults and beauties; in almost every face, and every person, they may discover fine features and defects, good and bad qualities.

Under these circumstances, the two sorts of people above mentioned fix their attention, those who are disposed to be happy, on the conveniences of things, the pleasant parts of conversation, the well-dressed dishes, the goodness of the wines, the fine weather, &c. and enjoy all with cheerfulness. Those, who are to be unhappy, think and speak only of the contraries. Hence they are continually discontented themselves, and by their remarks, sour the pleasures of society, offend personally many people, and make themselves every where disagreeable. If this turn of mind was founded in nature, such unhappy persons would be the more to be pitied. But as the disposition to criticise, and to be disgusted, is, perhaps, taken up originally by imitation, and is, unawares, grown into a habit, which, though at present strong, may nevertheless be cured, when those who have it are convinced of its bad effects on their felicity; I hope this little admonition may be of service to them, and put them on changing a habit, which, though in the exercise it is chiefly an act of imagination, yet has serious consequences in life, as it brings on real griefs and misfortunes. For, as many are offended by, and nobody loves this sort of people, no one shows them more than the most common civility and respect, and scarcely that; and this frequently puts them out of humour, and draws them into disputes and contentions. If they aim at obtaining some advantage in rank or fortune, nobody wishes

them success, or will stir a step, or speak a word, to favour their pretensions. If they incur public censure or disgrace, no one will defend or excuse, and many join to aggravate their misconduct, and render them completely odious. If these people will not change this bad habit, and condescend to be pleased with what is pleasing, without fretting themselves and others about the contraries, it is good for others to avoid an acquaintance with them; which is always disagreeable, and sometimes very inconvenient, especially when one finds oneself entangled in their quarrels.

An old philosophical friend of mine was grown from experience, very cautious in this particular, and carefully avoided any intimacy with such people. He had, like other philosophers, a thermometer, to show him the heat of the weather, and a barometer, to mark when it was likely to prove good or bad; but there being no instrument invented to discover, at first sight, this unpleasing disposition in a person, he, for that purpose, made use of his legs; one of which was remarkably handsome, the other, by some accident, crooked and deformed. If a stranger, at the first interview, regarded his ugly leg more than his handsome one, he doubted him. If he spoke of it, and took no notice of the handsome leg, that was sufficient to determine my philosopher to have no further acquaintance with him. Every body has not this two-legged instrument; but every one, with a little attention, may observe signs of that carping, fault-finding disposition, and take the same resolution of avoiding the acquaintance of those infected with it. I therefore advise those critical, querulous, discontented, unhappy people, that, if they wish to be respected and beloved by others, and happy in themselves, they should *leave off looking at the ugly leg*.

BAGATELLES.

THE BUSY-BODY.

No. I.

From the American Weekly Mercury, February 4, 1729.

Mr. Andrew Bradford,—I design this to acquaint you, that I, who have been one of your courteous readers, have lately entertained some thoughts of setting up for an author myself; not out of the least vanity, I assure you, or desire of showing my parts, but purely for the good of my country.

I have often observed with concern, that your Mercury is not always equally entertaining. The delay of ships expected in, and want of fresh advices from Europe, make it frequently very dull; and I find the freezing of our river has the same effect on news as on trade. With more concern I have continually observed the growing vices and follies of my country folk: and though reformation is properly the concern of every man, that is, every one ought to mind one; yet it is true, in this case, that what is everybody's business is nobody's business, and the business is done accordingly. I, therefore, upon mature deliberation, think fit to take nobody's business wholly into my own hands; and, out of zeal for the public good, design to erect myself into a kind of *censor morum;* purporting with your allowance, to make use of the Weekly Mercury as a vehicle in which my remonstrances shall be conveyed to the world.

I am sensible I have in this particular undertaken a very unthankful office, and expect little besides my labour for my pains. Nay, it is probable I may displease a great number of your readers, who will not very well like to pay ten shillings a year for being told of their faults. But as most people delight in the censure, when they themselves are not the objects of it, if any are offended at my exposing their private vices, I promise they shall have the satisfaction, in a very little time, of seeing their good friends and neighbours in the same circumstances.

However, let the fair sex be assured, that I shall always treat them and their affairs with the utmost decency and respect. I intend now and then to dedicate a chapter wholly to their service; and if my lectures contribute any way to the embellishment of their minds, and brightning of their understandings, without offending their modesty, I doubt not of having their favour and encouragement.

It is certain that no country in the world produces naturally finer spirits than ours, men of genius for every kind of science, and capable of acquiring to perfection every qualification, that is in esteem among mankind. But as few have the advantage of good books, for want of which good conversation is still more scarce, it would doubtless have been very acceptable to your readers, if, instead of an old out-of-date article from Muscovy or Hungary you had entertained them with some well chosen extract from a good author. This I shall sometimes do, when I happen to have nothing of my own to say that I think of more consequence. Sometimes I purpose to deliver lectures of morality or philosophy, and (because I am naturally inclined to be meddling with things that do not concern me) perhaps I may sometimes talk politics. And if I can by any means furnish out a week's entertainment for the public, that will give a rational diversion, and at the same time be instructive to the readers, I shall think my leisure hours well employed: and if you publish this, I hereby invite all ingenious gentlemen and others (that approve of such an undertaking) to my assistance and correspondence.

It is like, by this time, you have a curiosity to be acquainted with my name and character. As I do not aim at public praise, I design to remain concealed: and there are such numbers of our family and relations at this time in the country, that though I have signed my name at full length, I am not under the least apprehension of being discovered by it. My character, indeed, I would favour you with, but that I am cautious of praising myself, lest I should be told my trumpeter's dead; and I cannot find in my heart at present to say any thing to my own disadvantage.

It is very common with authors in their first performances, to talk to their readers thr-

If this meets with a suitable reception, or, if this should meet due encouragement, I shall publish hereafter, &c. This only manifests the value they put upon their own writings, since they think to frighten the public into their applause, by threatening, that unless you approve what they have already wrote, they intend never to write again; when perhaps it may not be a pin matter whether they ever do or no. As I have not observed the critics to be more favourable on this account, I shall always avoid saying any thing of the kind; and conclude with telling you, that if you send me a bottle of ink and a quire of paper by the bearer, you may depend upon hearing further from, sir, your humble servant,

THE BUSY-BODY.

No. II.

Feb. 11, 1729.

All fools have still an itching to deride
And fain would be upon the laugning side.—*Pope.*

Monsieur Rochefoucault tells us somewhere in his memoirs, that the prince of Conde delighted much in ridicule, and used frequently to shut himself up for half a day together in his chamber, with a gentleman that was his favourite, purposely to divert himself with examining what was the foible, or ridiculous side, of every person in the court. That gentleman said afterwards in some company, that nothing appeared to him more ridiculous in any body than this same humour in the prince; and I am somewhat inclined to be of this opinion. The general tendency there is among us to this embellishment, (which I fear has too often grossly imposed upon my countrymen, instead of wit,) and the applause it meets with from a rising generation, fill me with fearful apprehensions for the future reputation of my country: a young man of modesty, (which is the most certain indication of large capacities) is hereby discouraged from attempting to make a figure in life: his apprehensions of being outlaughed, will force him to continue in a restless obscurity, without having an opportunity of knowing his own merit himself, or discovering it to the world, rather than venture to expose himself in a place, where a pun or a sneer shall pass for wit, noise for reason, and the strength of the argument be judged by that of the lungs. Among these worthy gentlemen, let us take a view of Ridentius: what a contemptible figure does he make with his train of paltry admirers! this wight shall give himself an hour's diversion with the cock of a man's hat, the heels of his shoes, an unguarded expression in his discourse, or even some personal defect; and the height of his low ambition is to put some one of the company to the blush, who perhaps must pay an equal share of the reckoning with himself. If such a fellow makes laughing the sole end and purpose of his life, if it is necessary to his constitution, or if he has a great desire of growing suddenly fat, let him eat; let him give public notice where any dull stupid rogues may get a quart of four-penny for being laughed at; but it is barbarously unhandsome when friends meet for the benefit of conversation, and a proper relaxation from business, that one should be the butt of the company, and four men made merry at the cost of the fifth.

How different is this character from that of the good-natured gay Eugenius; who never spoke yet but with a design to divert and please; and who was never yet baulked in his intention. Eugenius takes more delight in applying the wit of his friends, than in being admired himself; and if any one of the company is so unfortunate as to be touched a little too nearly, he will make use of some ingenious artifice to turn the edge of ridicule another way, choosing rather to make himself a public jest, than to be at the pain of seeing his friend in confusion.

Among the tribe of laughers I reckon the pretty gentlemen that write satires, and carry them about in their pockets, reading them themselves in all companies which they happen into; taking advantage of the ill taste of the town, to make themselves famous for a pack of paltry low nonsense, for which they deserve to be kicked, rather than admired, by all who have the least tincture of politeness. These I take to be the most incorrigible of all my readers; nay I suspect they will be squibbing at the Busy-Body himself. However, the only favour he begs of them is, that if they cannot control their overbearing itch for scribbling, let him be attacked in downright biting lyrics; for there is no satire he dreads half so much as an attempt towards a panegyric.

No. III.

Feb. 18, 1729.

Non vultus instantis Tyranni
Mente quatit solida, nec auster,
Dux inquieti turbidus Adriæ
Nec fulminantis magna Jovis manus.—*Hor.*

It is said that the Persians, in their ancient constitution, had public schools, in which virtue was taught as a liberal art or science: and it is certainly of more consequence to a man that he has learned to govern his passions; in spite of temptation, to be just in his dealings; to be temperate in his pleasures, to support himself with fortitude under his misfortunes, to behave with prudence in all his affairs, and in every circumstance of life; I say, it is of much more real advantage to him to be thus qualified, than to be a master of all the arts and sciences in the world besides.

Virtue alone is sufficient to make a great

man glorious and happy. He that is acquainted with Cato, as I am, cannot help thinking as I do now, and will acknowledge he deserves the name, without being honoured by it. Cato is a man whom fortune has placed in the most obscure part of the country. His circumstances are such as only put him above necessity, without affording him many superfluities: yet who is greater than Cato. I happened but the other day to be at a house in town, where, among others, were met men of the most note in this place; Cato had business with some of them, and knocked at the door. The most trifling actions of a man, in my opinion, as well as the smallest lineaments and features of the face, give a nice observer some notion of his mind. Methought he rapped in such a peculiar manner, as seemed of itself to express, there was one who deserved as well as desired admission. He appeared in the plainest country garb; his great coat was coarse, and looked old and threadbare; his linen was homespun; his beard perhaps of seven days' growth; his shoes thick and heavy; and every part of his dress corresponding. Why was this man received with such concurring respect from every person in the room, even from those who had never known him or seen him before? It was not an exquisite form of person or grandeur of dress, that struck us with admiration. I believe long habits of virtue have a sensible effect on the countenance: there was something in the air of his face, that manifested the true greatness of his mind; which likewise appeared in all he said, and in every part of his behaviour, obliging us to regard him with a kind of veneration. His aspect is sweetened with humanity and benevolence, and at the same time emboldened with resolution, equally free from diffident bashfulness and an unbecoming appearance. The consciousness of his own innate worth and unshaken integrity render him calm and undaunted in the presence of the most great and powerful, and upon the most extraordinary occasions. His strict justice and known impartiality make him the arbitrator and decider of all differences that arise for many miles around him, without putting his neighbours to the charge, perplexity, and uncertainty of lawsuits. He always speaks the thing he means, which he is never afraid nor ashamed to do, because he knows he always means well; and therefore is never obliged to blush and feel the confusion of finding himself detected in the meanness of a falsehood. He never contrives ill against his neighbour, and therefore is never seen with a lowering suspicious aspect. A mixture of innocence and wisdom makes him ever seriously cheerful. His generous hospitality to strangers, according to his ability; his goodness, his charity, his courage in the cause of the oppressed, his fidelity in friendship, his humility, his honesty and sincerity, his moderation and his loyalty, his piety, his temperance, his love to mankind, his magnanimity, his public spiritedness, and in fine his consummate virtue, make him justly deserve to be esteemed the glory of his country.

The brave do never shun the light:
Just are their thoughts and open are their tempers,
Freely without disguise they love and hate;
Still are they found in the fair face of day,
And heaven and men are judges of their actions.—*Rowe.*

Who would not rather choose, if it were in his choice, to merit the above character, than be the richest, the most learned, or the most powerful man in the province without it?

Almost every man has a strong natural desire of being valued and esteemed by the rest of his species; but I am concerned and grieved to see how few fall into the right and only infallible method of becoming so. That laudable ambition is too commonly misapplied, and often ill applied. Some, to make themselves considerable, pursue learning; others grasp at wealth; some aim at being thought witty; and others are only careful to make the most of a handsome person: but what is wit, or wealth, or form, or learning, when compared with virtue? It is true, we love the handsome, we applaud the learned, and we fear the rich and powerful; but we even worship and adore the virtuous. Nor is it strange; since men of virtue are so rare, so very rare to be found.

If we were as industrious to become good, as to make ourselves great, we should become really great by being good, and the number of valuable men would be much increased; but it is a great mistake to think of being great without goodness; and I pronounce it as certain, that there never yet was a truly great man, that was not at the same time truly virtuous.

O Cretico! thou sour philosopher! thou cunning statesman! thou art crafty, but far from being wise. When wilt thou be esteemed, regarded, and beloved like Cato? When wilt thou, among thy creatures, meet with that unfeigned respect, and warm good will, that all men have for him? Wilt thou never understand, that the cringing, mean, submissive deportment of thy dependants, is (like the worship paid by Indians to the devil) rather through fear of the harm thou mayest do them, than out of gratitude for the favours they have received from thee? Thou art not wholly void of virtue; there are many good things in thee; and many good actions reported of thee. Be advised by thy friend: neglect those musty authors; let them be covered with dust, and moulder on their proper shelves; and do thou apply thyself to a study much more profitable, the knowledge of mankind and of thyself.

This is to give notice, that the Busy-Body

strictly forbids all persons, from this time forward, of what age, sex, rank, quality, degree, or denomination, soever, on any pretence, to inquire who is the author of this paper, on pain of his displeasure (his own near and dear relations only excepted.)

It is to be observed, that if any bad characters happen to be drawn in the course of these papers, they mean no particular person, if they are not particularly applied.

Likewise, that the author is no party man, but a general meddler.

N. B. Cretico lives in a neighbouring province.

No. IV.

Feb. 25, 1729.

Nequid nemis.

In my first paper, I invited the learned and the ingenious to join with me in this undertaking; and I now repeat that invitation. I would have such gentlemen, take this opportunity (by trying their talent in writing) of diverting themselves and friends, and improving the taste of the town. And because I would encourage all wit of our own growth and produce, I hereby promise, that whoever shall send me a little essay on some moral or other subject, that is fit for public view in this manner, (and not basely borrowed from any other author,) I shall receive it with candour, and take care to place it to the best advantage. It will be hard if we cannot muster up in the whole country a sufficient stock of sense to supply the Busy-Body at least for a twelvemonth. For my own part, I have already professed, that I have the good of my country wholly at heart in this design, without the least sinister view; my chief purpose, being to inculcate the noble principles of virtue, and depreciate vice of every kind. But as I know the mob hate instruction, and the generality would never read beyond the first line of my lectures, if they were actually filled with nothing but wholesome precepts and advice, I must therefore sometimes humour them in their own way. There are a set of great names in the province, who are the common objects of popular dislike. If I can now and then overcome my reluctance, and prevail with myself to satirize a little, one of these gentlemen, the expectation of meeting such a gratification will induce many to read me through, who would otherwise proceed immediately to the foreign news. As I am very well assured the greatest men among us have a sincere love for their country, notwithstanding its ingratitude, and the insinuations of the envious and malicious to the contrary, so I doubt not but they will cheerfully tolerate me in the liberty I design to take for the end above mentioned.

As yet I have but few correspondents, though they begin now to increase. The following letter left for me at the printer's, is one of the first I have received, which I regard the more that it comes from one of the fair sex, and because I have myself often times suffered under the grievance therein complainined of.

To the Busy-Body.

Sir,—You having set yourself up for a *censuror morum*, (as I think you call it,) which is said to mean a reformer of manners, I know no person more proper to be applied to for redress in all the grievances we suffer from want of manners in some people. You must know I am a single woman, and keep a shop in this town for a livelihood. There is a certain neighbour of mine, who is really agreeable company enough, and with whom I have had an intimacy of some time standing; but of late she makes her visits so exceedingly often, and stays so long every visit, that I am tired out of all patience. I have no manner of time at all to myself; and you who seem to be a wise man, must needs be sensible, that every person has little secrets and privacies, that are not proper to be exposed even to the nearest friend. Now I cannot do the least thing in the world, but she must know about it; and it is a wonder I have found an opportunity to write you this letter. My misfortune is, that I respect her very well, and know not how to disoblige her so much as to tell her I should be glad to have less of her company; for if I should once hint such a thing, I am afraid she would resent it so as never to darken my door again.—But, alas, sir, I have not yet told you half my affliction. She has two children that are just big enough to run about and do pretty mischief: these are continually along with mamma, either in my room or shop, if I have ever so many customers or people with me about business. Sometimes they pull the goods off my low shelves down to the ground, and perhaps where one of them has just been making water. My friend takes up the stuff and cries—"Oh! thou little wicked, mischievous rogue! but, however, it has done no great damage; it is only wet a little;" and so puts it upon the shelf again. Sometimes they get to my cask of nails behind the counter, and divert themselves, to my great vexation, with mixing my tenpenny and eightpenny and fourpenny together. I endeavour to conceal my uneasiness as much as possible, and, with a grave look, to go on sorting them out. She cries,—"Don't thee trouble thyself, neighbour; let them play a little; I'll put all to rights before I go." But things are never so put to rights but that I find a great deal of work to do after they are gone. Thus, sir, I have all the trouble and pesterment of children without the pleasure of calling them my own; and they are now so used to being here that they will be content no where else. If she would have been so kind as to have mode-

rated her visits to ten times a day, and staid but half an hour at a time, I should have been contented, and I believe never have given you this trouble; but this very morning they have so tormented me that I could bear no longer; for while the mother was asking me twenty impertinent questions, the youngest got to my nails, and, with great delight, rattled them by handfulls all over the floor; and the other at the same time made such a terrible din upon my counter with a hammer, that I grew half distracted. I was just then about to make myself a new suit of pinners, but in the fret and confusion I cut it quite out of all manner of shape, and utterly spoiled a piece of the first muslin. Pray, sir, tell me, what shall I do? and talk against such unreasonable visitings in your next paper; though I would not have her affronted with me for a great deal, for I sincerely love her and her children, as well I think as a neighbour can, and she buys a great many things in a year at my shop.—But I would beg her to consider she uses me unmercifully, though I believe it is only for want of thought. But I have twenty things more to tell you besides all this: there is a handsome gentleman that has a mind (I don't question) to make love to me; but he can't get the opportunity to—O dear! here she comes again!—I must conclude.—Yours, &c.

PATIENCE.

Indeed it is well enough, as it happens, that she is come to shorten this complaint, which I think is full long enough already, and probably would otherwise have been as long again. However I confess I cannot help pitying my correspondent's case, and in her behalf exhort the visiter to remember and consider the words of the wise man, "Withdraw thy foot from the house of thy neighbour, lest he grow weary of thee and so hate thee." It is, I believe, a nice thing, and very difficult, to regulate our visits in such a manner as never to give offence by coming too seldom, or too often, or departing too abruptly, or staying too long. However, in my opinion, it is safest for most people, in a general way, who are unwilling to disoblige, to visit seldom and tarry but a little while in a place; notwithstanding pressing invitations, which are many times insincere. And though more of your company should be really desired; yet in this case too much reservedness is a fault more easily excused than the contrary.

Men are subject to various inconveniencies merely through lack of a small share of courage, which is a quality very necessary in the common occurrences of life, as well as in a battle. How many impertinencies do we daily suffer with great uneasiness, because we have not courage enough to discover our dislikes? And why may not a man use the boldness and freedom of telling his friends, that their long visits sometimes incommode him. On this occasion it may be entertaining to some of my readers, if I acquaint them with the Turkish manner of entertaining visiters, which I have from an author of unquestionable veracity; who assures us, that even the Turks are not so ignorant of civility and the arts of endearment, but that they can practise them with as much exactness as any other nation. whenever they have a mind to show themselves obliging.

"When you visit a person of quality," says he, "and have talked over your business, or the compliments, or whatever concern brought you thither, he makes a sign to have things served in for the entertainment, which is, generally, a little sweetmeats, a cup of a sherbet, and another of coffee; all which are immediately brought in by the servants, and tendered to all the guests in order, with the greatest care and awfulness imaginable. At last comes the finishing part of the entertainment, which is perfuming the beards of the company; a ceremony which is performed in this manner: they have for the purpose a small chaffing dish, covered with a lid full of holes, and fixed upon a handsome plate. In this they put some fresh coals, and upon them a piece of aloes wood, and shutting it up, the smoke immediately ascends with a grateful odour through the holes of the cover. The smoke is held under every one's chin, and offered as it were a sacrifice to his beard. The brisly idol soon receives the reverence done to it, and so greedily takes in and incorporates the gummy steam, that it retains the savour of it, and may serve for a nosegay a good while after.

"The ceremony may perhaps seem ridiculous at first, but it passes among the Turks as a high gratification. And I will say this in vindication, that its design is very wise and useful, for it is understood to give a civil dismission to the visitants, intimating to them, that the master of the house has business to do, or some other avocation, that permits them to go away as soon as they please; and the sooner after this ceremony the better. By this means you may at any time, without offence, deliver yourself from being detained from your affairs by tedious and unseasonable visits; and from being constrained to use that piece of hypocrisy, so common in the world, of pressing those to stay longer with you, whom perhaps, in your heart, you wish a great way off for having troubled you so long already."

Thus far my author. For my own part, I have taken such a fancy to this Turkish custom, that for the future I shall put something like it in practice. I have provided a bottle of right French brandy for the men, and citron water for the ladies. After I have treated with a dram, and presented a pinch of my best snuff, I expect all company will retire.

and leave me to pursue my studies for the good of the public.

Advertisement.

I give notice, that I am actually now compiling, and design to publish in a short time, the true history of the rise, growth, and progress of the renowned Tiff-Club. All persons who are acquainted with any facts, circumstances, characters, transactions, &c. which will be requisite to the perfecting and embellishment of the said work, are desired to communicate the same to the author, and direct their letters to be left with the printer hereof.

The letter signed *Would-be-something*, came to hand.

No. V.

Vos, O patricius sanguis, quos vivere fas est,
Occipiti cæco, posticis occurrite sannæ.—*Persius.*

This paper being designed for a terror to evil doers, as well as a praise to them that do well, I am lifted up with secret joy to find, that my undertaking is approved, and encouraged, by the just and good, and that few are against me but those who have reason to fear me.

There are little follies in the behaviour of most men, which their best friends are too tender to acquaint them with; there are little vices and small crimes, which the law has no regard to or remedy for: there are likewise great pieces of villany sometimes so craftily accomplished, and so circumspectly guarded, that the law can take no hold of the actors. All these things, and things of this nature, come within my province as Censor, and I am determined not to be negligent of the trust I have reposed in myself, but resolve to execute my office diligently and faithfully.

All the world may judge without how much humanity as well as justice I shall behave in this office; and that even my enemies may be convinced I take no delight to rake into the dunghill lives of vicious men; and to the end that certain persons may be a little eased of their fears, and relieved from the terrible palpitations they have lately felt and suffered, and do still suffer; I hereby graciously pass a general act of oblivion, for all offences, crimes, and misdemeanours, of what kind soever, committed from the beginning of the year 1681, until the day of the date of my first paper, and promise only to concern myself with such as have been since and shall hereafter be committed. I shall take no notice who has (heretofore) raised a fortune by fraud and oppression, nor who by deceit and hypocrisy; what woman has been false to her good husband's bed, nor what man has by barbarous usage or neglect, broke the heart of a faithful wife; and wasted his health and substance in debauchery; what base wretch has betrayed his friend, and sold his honesty for gold, nor what baser wretch corrupted him, and then bought the bargain: all this, and much more of the same kind, I shall forget, and pass over in silence; but then it is to be observed, that I expect and require a sudden and general amendment.

These threatenings of mine, I hope, will have a good effect, and, if regarded, may prevent abundance of folly and wickedness in others, and at the same time save me abundance of trouble: and that people may not flatter themselves with the hopes of conceaing their loose misdemeanours from my knowledge, and in that view persist in evil doing, I must acquaint them, that I have lately entered into an intimacy with the extraordinary person who some time ago wrote me the following letter; and who, having a wonderful faculty, that enables him to discover the most secret iniquity, is capable of giving me great assistance in my designed work of reformation.

No. VI.

"Mr. Busy-Body,—I rejoice, sir, at the opportunity you have given me to be serviceable to you, and by your means, to this province; you must know, that such have been the circumstances of my life, and such were the marvellous occurrences of my birth, that I have not only a faculty of discovering the actions of persons that are absent or asleep, but even of the devil himself in many of his secret workings, in the various shapes, habits, and names of men and women; and having travelled and conversed much, and met with but a very few of the same perceptions and qualifications, I can recommend myself to you as the most useful man you can correspond with. My father's father's father (for we had no grandfathers in our family) was the same John Bunyan that writ that memorable book, *The Pilgrim's Progress*, who had, in some degree, a natural faculty of second sight. This faculty (how derived to him our family memoirs are not very clear) was enjoyed by all his descendants, but not by equal talents. It was very dim in several of my first cousins, and probably had been nearly extinct in our particular branch, had not my father been a traveller. He lived in his youthful days in New England. There he married, and there was born my elder brother, who had so much of this faculty, as to discover witches in some of their occult performances. My parents transporting themselves to Great Britain, my second brother's birth was in that kingdom. He shared but a small portion of this virtue, being only able to discern transactions about the time of and after their happening. My good father, who delighted in the Pilgrim's Progress, and mountainous places, took shipping with his wife for Scotland, and inhabit-

ed in the Highlands, where myself was born, and whether the soil, climate, or astral influences, of which are preferred divers prognostics, restored our ancestor's natural faculty of second sight in a greater lustre to me, than it had shined in through several generations, I will not here discuss. But so it is, that I am possessed largely of it, and design, if you encourage the proposal, to take this opportunity of doing good with it, which I question not will be accepted of in a grateful way by many of your honest readers, though the discovery of my extraction bodes me no deference from your great scholars and modern philosophers. This my father was long ago aware of, and lest the name alone should hurt the fortunes of his children, he in his shiftings from one country to another, changed it.

"Sir, I have only this further to say, how I may be useful to you, and as a reason for my not making myself more known in the world: by virtue of this great gift of nature, second-sightedness, I do continually see numbers of men, women, and children, of all ranks, and what they are doing, while I am sitting in my closet; which is too great a burden for the mind, and makes me also conceit, even against reason, that all this host of people can see and observe me, which strongly inclines me to solitude, and an obscure living; and on the other hand, it will be an ease to me to disburden my thoughts and observations in the way proposed to you, by, sir, your friend and servant."

I conceal this correspondent's name in my care for his life and safety, and cannot but approve his prudence in choosing to live obscurely. I remember the fate of my poor monkey: he had an ill-natured trick of grinning and chattering at every thing he saw in petticoats: my ignorant country neighbours got a notion that pug snarled by instinct at every female who had lost her virginity. This was no sooner generally believed, than he was condemned to death; by whom I could never learn, but he was assassinated in the night, barbarously stabbed and mangled in a thousand places, and left hanging dead on one of my gate posts, where I found him the next morning.

The Censor observing that the itch of scribbling begins to spread exceedingly, and being carefully tender of the reputation of his country in point of wit, and good sense, has determined to take all manner of writings, in verse or prose, that pretend to either, under his immediate cognizance; and accordingly hereby prohibits the publishing any such for the future till they have first passed his examination, and received his imprimatur: for which he demands as a fee only six pence per sheet.

N. B. He nevertheless permits to be published, all satirical remarks on the Busy-Body, the above prohibition notwithstanding, and without examination or requiring the said fees; which indulgence the small wits, in and about the city, are advised gratefully to accept and acknowledge.

The gentleman who calls himself Sirronis, is directed, on receipt of this, to burn his great book of crudities.

P. S. In compassion to that young man on account of the great pains he has taken, in consideration of the character I have just received of him, that he is really good natured, and on condition he shows it to no foreigner, or stranger of sense, I have thought fit to reprieve his said great book of crudities from the flames till further order.

No. VII.

Noli me tangere.

I HAD resolved when I first commenced this design, on no account to enter into a public dispute with any man; for I judged it would be equally unpleasant to me, and my readers, to see this paper filled with contentious wranglings, answers, replies, &c. which is a way of writing that is endless, and at the same time seldom contains any thing that is edifying or entertaining. Yet, when such a considerable man as Mr.—— finds himself so warmly concerned to accuse and condemn me, as he has done in Keimer's last Instructor, I cannot forbear endeavouring to say something in my own defence, from one of the worst characters that could be given me by a man of worth. But as I have many things of more consequence to offer to the public, I declare that I never will, after this time, take notice of any accusations not better supported with truth and reason; much less may every little scribbler, that shall attack me, expect an answer from the Busy-Body.

The sum of the charge delivered against me, either directly or indirectly, in the said paper, is this: not to mention the first mighty sentence concerning vanity and ill nature, and the shrewd intimation that I am without charity, and therefore can have no pretence to religion, I am represented as guilty of defamation and scandal, the odiousness of which is apparent to every good man; and the practice of it opposite to Christianity, morality, and common justice, and in some cases so far below all these, as to be inhuman; as a blaster of reputations; as attempting by a pretence, to screen myself from the imputation of malice and prejudice; as using a weapon which the wise and better part of mankind hold in abhorrence; and as giving treatment which the wiser and better part of mankind dislike, on the same principles and for the same reasons, as they do assassination, &c.; and all this is inferred and concluded from a character I have wrote in my No. III.

In order to examine the justice and truth of this heavy charge, let us recur to that cha-

racter. And here we may be surprised to find what a trifle has raised this mighty clamour and complaint, this grievous accusation! The worst thing said of the person, in what is called my gross description, (be he who he will to whom my accuser has applied the character of Critico) is, that he is a sour philosopher, crafty, but not wise. Few human characters can be drawn that will not fit somebody in so large a country as this; but one would think, supposing I meant Critico a real person, I had sufficiently manifested my impartiality, when I said in that very paragraph, that Critico is not without virtue; that there are many good things in him, and many good actions reported of him; which must be allowed in all reason, much to overbalance in his favour those worst words, sour-tempered and cunning. Nay, my very enemy and accuser must have been sensible of this, when he freely acknowledges, that he has been seriously considering, and cannot yet determine which he would choose to be, the Cato or Critico of that paper; since my Cato is one of the best characters. Thus much in my own vindication. As to the only reason there given why I ought not to continue drawing characters, viz. Why should any man's picture be published that he never sat for, or his own good name taken from him any more than his money or possessions, at the arbitrary will of another? &c. I have but this to answer: the money or possessions I presume are nothing to the purpose; since no man can claim a right to either those or a good name, if he has acted so as to forfeit them. And are not the public the only judges what share of reputation they may think proper to allow to any man? Supposing I was capable, and had an inclination, to draw all the good and bad characters in America, why should a good man be offended with me for drawing good characters? And if I draw ill ones, can they fit any other but those that deserve them? And ought any but such be incensed that they have their desert? I have as great an aversion and abhorrence for defamation and scandal as any man, and would with the utmost care avoid being guilty of such base things: besides, I am very sensible and certain, that if I should make use of this paper to defame any person, my reputation would be sooner hurt than his; and the Busy-Body would quickly become detestable; because, in such a case, as is justly observed, the pleasure arising from a tale of wit and novelty soon dies away in generous and honest minds, and is followed with a secret grief, to see their neighbours calumniated. But if I myself was actually the worst man in the province, and any one should draw my true character, would it not be ridiculous in me to say, he had defamed and scandalized me, unless he had added in a matter of truth? If any thing is meant by asking, why any man's picture should be published which he never sat for, it must be, that we should give no character without the owner's consent. If I discern the wolf disguised in harmless wool, and contriving the destruction of my neighbour's sheep, must I have his permission, before I am allowed to discover and prevent him? If I know a man to be a designing knave, must I ask his consent to bid my friends beware of him? If so, then by the same rule, supposing the Busy-Body had really merited all his enemy had charged him with, his consent ought likewise to have been obtained, before so terrible an accusation was published against him.

I shall conclude with observing, that in the last paragraph save one of the piece now examined, much ill nature and some good sense are coinhabitants (as he expresses it.) The ill nature appears in his endeavouring to discover satire where I intended no such thing, but quite the reverse: the good sense is this, that drawing too good a character of any one is a refined manner of satire that may be as injurious to him as the contrary, by bringing on an examination that undresses the person, and in the haste of doing it, he may happen to be stript of what he really owns and deserves. As I am Censor, I might punish the first, but I forgive it. Yet I will not leave the latter unrewarded; but assure my adversary, that in consideration of the merit of those four lines, I am resolved to forbear injuring him in that refined manner.

I thank my neighbour P—— W—— for his kind letter.

The lions complained of shall be muzzled.

No. VIII.

March 27, 1720.

Quid non mortalia pectora cogis,
Auri sacra fames.—*Virgil.*

One of the greatest pleasures an author can have, is certainly the hearing his works applauded. The hiding from the world our names, while we publish our thoughts, is so absolutely necessary to this self gratification, that I take my well wishers will congratulate me on my escape from many diligent but fruitless inquiries that of late have been made after me. Every man will own that an author as such, ought to be hid by the merit of his productions only; but pride, party, and prejudice, at this time run so very high, that experience shows we form our notions of a piece by the character of the author. Nay there are some very humble politicians in and about the city who will ask on which side the writer is, before they presume to give their opinion of the thing wrote. This ungenerous way of proceeding I was full aware of before I published my first speculation; and therefore concealed my name. And I appeal to

the more generous part of the world, if I have, since I appeared in the character of the Busy-Body, given an instance of my siding with any party more than another, in the unhappy divisions of my country; and I have above all this satisfaction in myself, that neither affection, aversion, or interest have biassed me to use any partiality towards any man, or set of men; but whatsoever I find nonsensical, ridiculous, or immorally dishonest, I have and shall continue openly to attack with the freedom of an honest man and a lover of my country.

I profess I can hardly contain myself, or preserve the gravity and dignity that should attend the censorial office, when I hear the odd and unaccountable expositions that are put upon some of my works, through the malicious ignorance of some, and vain pride of more than ordinary penetration in others; one instance of which many of my readers are acquainted with. A certain gentleman has taken a great deal of pains to write a key to the letter in my No. IV., wherein he has ingeniously converted a gentle satire upon tedious and impertinent visitants, into a libel on some of the Government. This I mention only as a specimen of the taste of the gentleman; I am forsooth bound to please in my speculations, not that I suppose my impartiality will ever be called in question on that account. Injustice of this nature I could complain of in many instances; but I am at present diverted by the reception of a letter, which though it regards me only in my private capacity, as an adept, yet I venture to publish it for the entertainment of my readers.

To Censor Morum, Esq. Busy-Body general of the Province of Pennsylvania, and the counties of Newcastle, Kent, and Sussex upon Delaware.

"Honourable Sir,—I judge by your lucubrations, that you are not only a lover of truth and equity, but a man of part and learning, and a master of science; as such I honour you. Know then, most profound sir, that I have, from my youth up, been a very indefatigable student in, and admirer of, that divine science, astrology. I have read over Scot, Albertus Magnus, and Cornelius Agrippa above three hundred times; and was in hopes, by my knowledge and industry, to gain enough to have recompensed me for my money expended, and time lost in the pursuit of this learning. You cannot be ignorant, sir, (for your intimate second-sighted correspondent knows all things,) that there are large sums of money hidden under ground in divers places about this town, and in many parts of the country; but alas, sir, notwithstanding I have used all the means laid down in the immortal authors before mentioned, and when they failed, the ingenious Mr. P—d—l, with his mercurial wand and magnet, I have still failed in my purpose; this, therefore, I send, to propose and desire an acquaintance with you, and I do not doubt, notwithstanding my repeated ill fortune, but we may be exceedingly serviceable to each other in our discoveries; and that if we use our united endeavours, the time will come when the Busy-Body, his second-sighted correspondent, and your very honourable servant, will be three of the richest men in the province: and then, sir, what may we not do! a word to the wise is sufficient.

I conclude, with all demonstrable respect, yours and Urani's votary,

TITAN PLEIADS.

In the evening after I received this letter, I made a visit to my second-sighted friend, and communicated to him my proposal. When he had read it, he assured me that, to his certain knowledge, there is not at this time so much as one ounce of gold or silver hid under ground in any part of the province; for that the late and present scarcity of money had obliged those who were living, and knew where they had formerly hid any, to take it up and use it in their own necessary affairs: and as to all the rest, which was buried by pirates and others in old times, who were never like to come for it, he had himself long since dug it all up, and applied it to charitable uses; and this he desired me to publish for the general good. For as he acquainted me, there are amongst us great numbers of honest artificers and labouring people, who, fed with a vain hope of growing suddenly rich, neglect their business almost to the ruining of themselves and families, and voluntarily endure abundance of fatigue in a fruitless search after imaginary hidden treasures. They wander through the woods and bushes by day, to discover the marks and signs; at midnight they repair to those hopeful spots with spades and pickaxes; full of expectation they labour violently, trembling at the same time in every joint through fear of certain malicious demons, who are said to haunt and guard the places. At length a mighty hole is dug, and perhaps several cart loads of earth thrown out; but alas, no keg or iron pot is found! no seaman's chest ornamented with Spanish pistoles or weighty pieces of eight! Then they conclude that, through some mistake in the procedure, some rash word spoke, or some rule of art neglected, the guardian spirit had power to sink it deeper into the earth, and convey it out of his reach. Yet when a man is once thus infatuated, he is so far from being discouraged by ill success, that he is rather animated to double his industry, and will try again and again, in a hundred different places, in hopes at last of meeting with some lucky hit, that shall at once sufficiently reward them for all their expense of time and labour.

This odd humour of digging for money,

through a belief that much has been hid by pirates formerly frequenting the river, has for several years been mighty prevalent among us; insomuch that you can hardly walk half a mile out of the town on any side, without observing several pits dug with that design, and perhaps some lately opened. Men otherwise of very good sense have been drawn into this practice through an overrunning desire of hidden wealth, and an easy credulity of what they so earnestly wished might be true. While the rational and almost certain methods of acquiring riches by industry and frugality are neglected or forgotten. There seems to be some peculiar charm in the conceit of finding money, and if the sands of Schuylkill were so much mined with small grains of gold, that a man might in a day's time, with care and application, get together to the value of half a crown, I make no question but we should find several people employed there, that can with ease earn five shillings a day at their proper trades.

Many are the idle stories told of the private success of some people, by which others are encouraged to proceed; and the astrologers, with whom the country swarms at this time, are either in the belief of these things themselves, or find their advantage in persuading others to believe them; for they are often consulted about the critical times for digging, the methods of laying the spirit, and the like whimsies, which renders them very necessary to and very much caressed by, the poor deluded money hunters.

There is certainly something very bewitching in the pursuit after mines of gold and silver, and other valuable metals, and many have been ruined by it. A sea captain of my acquaintance used to blame the English for envying Spain their mines of silver, and too much despising and overlooking the advantages of their own industry and manufactures. "For my part," says he, "I esteeem the Banks of Newfoundland to be a more valuable possession than the mountains of Potosi; and when I have been there on the fishing account, I have looked upon every cod pulled up into the vessel as a certain quantity of silver ore, which required only carrying to the next Spanish port to be coined into pieces of eight; not to mention the national profit of fitting out and employing such a number of ships and seamen." Let honest Peter Buckram, who has long without success been a searcher after hidden money, reflect on this, and be reclaimed from this unaccountable folly; let him consider that every stitch he takes when he is on his shop-board is picking up a part of a grain of gold, that will in a few days time amount to a pistole; and let Faber think the same of every nail he drives, or every stroke with his plane; such thoughts may make them industrious, and of consequence in time they may be wealthy. But how absurd is it to neglect a certain profit for such a ridiculous whimsey; to spend whole days at the George tavern in company with an idle pretender to astrology, contriving schemes to discover what was never hidden, and forgetting how carelessly business is managed at home in their absence: to leave their wives and a warm bed at midnight (no matter if it rain, hail, snow, or blow a hurricane, provided that be the critical hour) and fatigue themselves with the violent exercise of digging for what they shall never find, and perhaps getting a cold that may cost their lives, or at least disordering themselves so as to be fit for no business besides for some days after. Surely this is nothing less than the most egregious folly and madness.

I shall conclude with the words of my discreet friend Agricola, of Chester county, when he gave his son a good plantation: "My son," says he, "I give thee now a valuable parcel of land; I assure thee I have found a considerable quantity of gold by digging there; thee mayest do the same: but thee must carefully observe this, never to dig more than plough deep."

No. IX.

Nov. 1735.

Mr. Busy-Body,—Pray let the prettiest creature in this place know, by publishing this, that if it was not for her affectation, she would be absolutely irresistible.

BOB BRIEF.

Mr. Brief appears to have communicated his laconic letter to others, at the same time that it was presented here; it has produced no less than six other communications, which follow in the order they were received.

Mr. Busy-Body,—I cannot conceive who Mr. Brief means, by the prettiest creature in this place; but I can assure either him or her, that she who is truly so, has no affectation at all. DIANA.

Sir,—As a correspondent of yours has thought fit to communicate to me his note to you; before it can be published, I have looked in my glass repeatedly,—a thousand times, perhaps, in a day—and if it was not for the charge of affectation, I might, without the charge of partiality, believe myself particularly pointed at. ROSELLA.

Mr. Busy-Body,—I must own that several have told me, I am the prettiest creature in this place, but I believe I should not be taxed with affectation, if I could have thought as well of them as they do of themselves.

ELVIRA.

Sir,—Your sex calls me pretty; my own, affected: is it from candour in the one, or envy in the other! ANNABELLA.

Mr. Busy-Body,—They that call me affected are greatly mistaken, for I don't know that I ever refused to kiss any body but a fool.—Mr. Brief will understand me.

KIT CANDOUR.

Friend Busy-Body,—I am not at all displeased at being accused of affectation; thou knowest the vain people call decency of behaviour and simplicity of manners by that name. Thy friend, DORCAS DAISY.

No. X.

Veritas luce clarior.

A friend of mine was the other day cheapening some trifles at a shopkeepers, and after a few words they agreed on a price. At the tying up of the parcels he had purchased, the mistress of the shop told him that, people were growing very hard, for she actually lost by every thing she sold. How then is it possible, said my friend, that you can keep on your business. Indeed, sir, answered she, I must of necessity shut my doors, had I not a very great trade. The reason said my friend (with a sneer) is admirable.

There are a great many retailers who falsely imagine, that being *historical* (the modern phrase for lying) is much for their advantage; and some of them have a saying, *that it is a pity lying is a sin, it is so useful in trade;* though if they would examine into the reason why a number of shopkeepers raise considerable estates while others who have set out with better fortunes have become bankrupts, they would find, that the former made up with truth, diligence, and probity, what they were deficient of in stock; while the latter have been guilty of imposing on such customers as they found had no skill in the quality of their goods.

The former character raises a credit which supplies the want of fortune, and their fair dealing brings them customers; whereas none will return to buy of him by whom he has been once imposed upon. If people in trade would judge rightly, we might buy blindfolded and they would save both to themselves and customers the unpleasantness of *haggling*.

Though there are numbers of shopkeepers who scorn the mean vice of lying, and whose word may very safely be relied on, yet there are too many who will endeavour, and backing their falsities with asseverations, pawn their salvation to raise their prices.

As example works more than precept, and my sole view being the good and interest of my countrymen, whom I could wish to see without any vice or folly, I shall offer an example of the veneration bestowed on truth and abhorrence of falsehood among the ancients.

Augustus triumphing over Mark Antony and Cleopatra, among other captives who accompanied them, brought to Rome a priest of about sixty years old; the senate being informed that this man had never been detected in a falsehood, and was believed never to have told a lie, not only restored him to liberty, but made him a high priest, and caused a statue to be erected to his honour. The priest thus honoured was an Egyptian, and an enemy to Rome, but his virtue removed all obstacles.

Pamphilius was a Roman citizen whose body upon his death was forbidden sepulture, his estate was confiscated, his house razed, and his wife and children banished the Roman territories wholly for his having been a notorious and inveterate liar.

Could there be greater demonstrations of respect for truth than these of the Romans, who elevated an enemy to the greatest honours, and exposed the family of a citizen to the greatest contumely?

There can be no excuse for lying, neither is there any thing equally despicable and dangerous as a liar, no man being safe who associates with him; for *he who will lie, will swear to it*, says the proverb, and such a one may endanger my life, turn my family out of doors, and ruin my reputation, whenever he shall find it his interest; and if a man will lie and swear to it in his shop to obtain a trifle, why should we doubt his doing so when he may hope to make a fortune by his perjury? The crime is in itself so mean, that to call a man a liar is esteemed every where an affront not to be forgiven.

If any have lenity enough to allow the dealers an excuse for this bad practice, I believe they will allow none for the gentleman who is addicted to this vice; and must look upon him with contempt. That the world does so is visible by the derision with which his name is treated whenever it is mentioned.

The philosopher Epimenides gave the Rhodians this description of Truth.—She is the companion of the gods, the joy of heaven, the light of the earth, the pedestal of justice, and the basis of good policy.

Eschines told the same people, that truth was a virtue, without which force was enfeebled, justice corrupted; humility became dissimulation, patience intolerable, chastity a dissembler, liberty lost, and pity superfluous.

Pharmanes the philosopher told the Romans that Truth was the centre on which all things rested: a chart to sail by, a remedy for all evils, and a light to the whole world.

Anaxarchus, speaking of Truth, said, it was health incapable of sickness, life not subject to death, an elixir that healeth all, a sun not to be obscured, a moon without eclipse, an herb which never withereth, a gate that is never closed, and a path which never fatigues the traveller.

But if we are blind to the beauties of truth, it is astonishing that we should not open our eyes to the inconvenience of falsity. A man given to romance must be always on his guard for fear of contradicting and exposing himself to derision; for the most *historical* would avoid the odious character, though it is impossible with the utmost circumspection to travel long on this route without detection, and shame and confusion follow. Whereas he who is a votary of truth never hesitates for an answer, has never to rack his invention to make the sequel quadrate with the beginning of his story, nor obliged to burden his memory with minute circumstances, since truth speaks easily what it recollects, and repeats openly and frequently without varying facts, which liars cannot always do, even though gifted with a good memory.

No. XI.

As the nail sticketh fast between the joinings of the stones, so doth sin stick close also between buying and selling.—*Apocrypha.*

We have received the two following letters, the first from a shopkeeper, and the other from a merchant.

To the Busy-Body.

Sir,—I am a shopkeeper in this city, and suppose I am the person at whom some reflections have been aimed in a late paper. It is an easy matter for gentlemen that can write, to say a great deal upon any subject, and to censure matters as faults of which they are as guilty as other people. I cannot help thinking that those remarks are written with much partiality, and give a very unfair representation of things. Shopkeepers are accused of lying, as if they were the only persons culpable in that way, and without the least notice being taken of the general practice of their customers. "I am sure it is very ordinary at that price," says one, "I have bought much better at such a one's shop for less money," says another, and the like disparaging expressions, are very common, so as to be almost worn threadbare; some have even the confidence to aver, that they have bought cheaper of me, when I know the price they mention is less than the goods cost me. In short, they will tell a hundred lies, to undervalue our goods, and make our demands appear extravagant. So that the blame of all the lying, properly belongs to the customers that come to buy, because if the shopkeepers strain the truth a little now and then, it is because they are forced to do it in their own defence. In hopes you will do us justice in this affair, I remain, your friend and servant,

BETTY DILIGENT.

Mr. Busy-Body,—Some notice has been lately taken of a prevailing vice, and very justly censured; that is the too common practice of lying by the shopkeepers in selling their goods; but the charge has been only half made; no notice is taken of their lying when they come to the stores to buy. I believe they think lying full as convenient in buying their goods as in selling them; and to my knowledge some of them are most egregiously guilty in this particular.—Yours,

MERCATOR.

No. XII.

Sir,—Being old and lame in my hands, and thereby incapable of assisting my fellow-citizens when their houses are on fire, I have thought it my duty to offer in return for the safety and aid I derive in common with others, to do what I can in the only way I am able; and I must beg my fellow-townsmen to take in good part, the following hints on the subject of fires.

In the first place, as *an ounce of prevention is worth a pound of cure*, as Poor Richard says, I would advise every one to take care how they suffer living brands, or coals in a full shovel, to be carried out of one room into another, or up or down stairs, unless in a covered warming pan, or some such close incombustible vessel; our houses are at present composed mostly of wooden materials, and sparks or flakes of fire may fall into chinks or corners where they may not inflame around them and make no appearance till midnight, when your stairs being in flames, you may be forced, as I was, to leap out of a window and hazard my neck to avoid the alternative of being roasted.

And now we talk of prevention, where would be the damage if to the act for preventing fires, by the regulation of bake-houses and coopers' shops, a clause were added to regulate all other houses in the particular of too shallow hearths, and the reprehensible practice of ornamenting fire-places with wooden chimney pieces and mouldings, which being commonly made of heart-pine, abounds with turpentine, and always stands ready for a blaze, as soon as a live coal or brand may come in contact with it.

Again, if chimneys were more frequently and more carefully cleaned, some fires might thereby be prevented; for I have known foul chimneys burn most furiously a few days after they had been swept, people in confidence of their being cleansed making large fires. Every body among us that pleases may undertake the business of chimney sweeping, but if a chimney takes fire after the owner has carefully caused it to be swept, the owner is obliged to pay the fine, and the sweeper goes free. This is not right. Those who undertake the sweeping of chimneys, and employ assistants for that purpose, ought to be licensed by the mayor, and if any chimney takes fire and

blazes out within fifteen days after the sweeping, the fine should be paid by the licensed sweeper for his default, for no chimney will fire if there be not soot left to harbour the sparks.

We have at present got engines enough in the town (1734,) but I question whether in many parts of the town water enough can be had to keep them going for half an hour together: it seems to me some public pumps are wanting; but that I submit to better judgments.

As to our conduct in the affair of extinguishing fires, though we do not want hands or good will, yet we seem to want order and method, and therefore I believe I cannot do better than to offer for our imitation the example of a city in a neighbouring province. There is, as I am well informed, a club or society of active men belonging to each fire engine, whose business is to attend all fires with the engine, whenever they happen, and to work it once a quarter of an hour, and see it kept in order. Some are assigned to handle the fire-hooks; others the axes, which are always kept with the engine and in good order; and for these services they are considered in abatement or exemption of taxes. In time of fire they are commanded by officers appointed according to forms prescribed by law, called *Firewards*, who are distinguished by an external mark, or a staff having at the end a brass emblem of flame of about six inches long; being men selected for their prudence and invested with authority, they alone direct the opening and stripping of roofs by the axe men; the pulling down burning timbers by the hook men; the playing of the engines upon proper points and places; and the opening of lanes among the crowds who usually attend, &c.; they are impowered to require assistance for the removing of goods out of houses on fire, or in danger of fire, and to appoint guards for securing those goods; disobedience to these officers at any such times is punished by a fine of 40 shillings or ten days imprisonment. These officers, with the men belonging to the engine, at their quarterly meetings, discourse of fines; of the faults committed at some; the good management at others; and thus communicating their experience they become wiser, and know as well to command as to execute in the best manner upon emergency. Since the establishment of these regulations there does not appear to have occurred any extraordinary fire in that place, and I wish there never may be any here or there.

But they suffered much before they had made such regulations, and so must we; for Italians say, *Englishmen feel but cannot see.* It has pleased God, however, that in the fires we have had hitherto, all the bad circumstances have never happened together, such as a dry season, high winds, narrow streets, and little or low water, which tends perhaps to make us more secure in our own minds; but if a fire with those circumstances should occur, which God forbid, we should afterwards learn to be more careful.

One thought more and I have done. I would wish that tiles or slates could be brought into use as covering to buildings; and that the roofs were not of so sharp a pitch as to prevent walking on them in safety.

Let others communicate their thoughts freely, and perhaps some good may grow out of it. A. A.

No. XIII.

Nothing is more like a fool than a drunken man.
Poor Richard.

It is an old remark, that Vice always endeavours to assume the appearance of Virtue; thus covetousness calls itself prudence, prodigality would be thought generous, and so of others. This perhaps arises hence, that mankind naturally and universally approve virtue in their hearts, and detest vice, therefore whenever through temptations they fall into vicious practices, they would if possible conceal it from themselves, as well as from others, under some name which does not belong to it.

But drunkenness is a very unfortunate vice; in this respect it bears no kind of similitude with any sort of virtue, from which it might possibly borrow a name; and is therefore reduced to the wretched necessity of being expressed by round about phrases, and of perpetually varying those phrases as often as they come to be well understood plainly to signify that a man is drunk.

Though every one may possibly recollect a dozen at least of these expressions, used on such occasions, yet I think no one who has not much frequented taverns could imagine the number of them to be so great as it really is. It may therefore surprise as well as divert the sober reader, to have a sight of a new piece lately communicated to me, entitled,

The Drinker's Dictionary.

A.

He 's addled.
He 's in his airs.
He 's affected.
He 's casting up his accounts.

B

He 's biggy.
He 's bewitched.
He 's black and black.
He 's bowzed.
He 's boozy.
He 's been at Barbadoes.
He 's been watering the brook.
He 's drunk as a wheelbarrow.
He 's bother'd.

He 's burdock'd.
He 's bosky.
He 's busky.
He 's buzzy.
He has sold a march in the brewer.
His head is full of bees.
He has been in the bibing plot.
He has drunk more than he has bled.
He 's bungy.
He has been playing beggar-my-neighbour.
He 's drunk as a beggar.
He sees the beams.
He has kissed black Betty.
He 's had a thump over the head with Samson's jaw-bone.
He has been at war with his brains.
He 's bridgy.

C.

He has been catching the cat.
He 's cogniaid.
He 's capable.
He 's cramped.
He 's cherubimical.
He 's cherry merry.
He 's wamble croft.
He 's crack'd.
He 's half way to Concord.
He 's canonized.
He has taken a chirping glass.
He 's got corns in his head.
He 's got a cup too much.
He 's coguay.
He 's cupsy.
He has heated his copper.
He 's in crocus.
He 's catch'd.
He cuts capers.
He has been in the cellar
He has been in the sun.
He 's in his cups.
He 's above the clouds.
He 's non compos.
He 's cock'd.
He 's curved.
He 's cut.
He 's chippered.
He 's chickenny.
He has loaded his cart.
He 's been too free with the creature.
Sir Richard has taken off his considering cap.
He 's chopfallen.
He 's candid.

He 's disguised.
He 's got a dish.
He has killed a dog.
He has taken his drops.
'Tis a dark day with him.
He 's a dead man.
He has dipped his bill.
He sees double.
He 's disfigured.
He has seen the devil.

E.

He 's prince Eugene.
He 's entered.
He has butted both eyes.
He is cock-eyed.
He has got the pole evil.
He has got a brass eye.
He has made an example.
He has ate a toad and a half for breakfast.
He 's in his element.

F.

He 's fishy.
He 's fox'd.
He 's fuddled.
He 's soon fuddled.
He 's frozen.
He 'll have frogs for supper.
He 's well in front.
He 's getting forward in the world.
He owes no man money.
He fears no man.
He 's crump fooled.
He has been to France.
He 's flushed.
He has frozen his mouth.
He 's fettered.
He has been to a funeral.
His flag is out.
He 's fuzzled.
He has spoken with his friend.
He has been at an Indian feast.

G.

He 's glad.
He 's grabable.
He 's great-headed.
He 's glazed.
He 's generous.
He has boozed the gage.
He 's as dizzy as a goose.
He has been before George.
He has got the gout.
He has got a kick in the guts.
He has been at Geneva.
He is globular.
He has got the glanders.
He 's on the go.
He 's a gone man.
He has been to see Robin Goodfellow.

H.

He 's half and half.
He 's half seas over.
He 's hardy.
He 's top heavy.
He has got by the head.
He makes head way.
He 's hiddey.
He has got on his little hat.
He 's hammerish.
He 's loose in the hilt.
He knows not the way home.
He 's haunted with evil spirits.
He has taken Hippocrates' grand Elixir.

I.

He 's intoxicated.
He 's jolly.
He 's jagged.
He 's jambled.
He 's jocular.
He 's juicy.
He 's going to Jericho.
He 's an indirect man.
He 's going to Jamaica.
He 's going to Jerusalem.

K.

He 's a king.
He clips the king's English.
He has seen the French king.
The king is his cousin.
He has got kibed heels.
He has got knapt.
His kettle 's hot.
He 'll be soon keel upward.

L.

He 's in liqour.
He 's lordly.
He 's light.
He 's lappy.
He 's limber.
He 's lopsided.
He makes indentures with his legs.
He 's limber.
He 's well to live.

M.

He sees two moons.
He 's merry.
He 's middling
He 's muddled.
He 's moon-eyed.
He 's maudlin.
He 's mountainous.
He 's muddy.
He 's mellow.
He 's seen a flock of moons.
He 's raised his monuments.

N.

He has eaten cocao nuts.
He 's nimtopsical.
He 's non compos.
He has got the night mare.
He has been nonsuited.
He is super nonsensical.
He 's in a state of nature.
He 's nonplus'd.

O.

He 's oiled.
He has ate opium.
He has smelt an onion.
He is an oxycrocum.
He is overset.
He is overcome.
He is out of sorts.
He is on the paymaster's books.

P.

He drank his last halfpenny.
He 's as good conditioned as a puppy.
He 's pigeon eyed.
He 's pungy.
He 's priddy.
He 's pushing on.
He has salt in his headban.
He has been among the Philistines.
He 's in prosperity.
He 's friends with Philip.
He 's contending with Pharaoh.
He has painted his nose.
He has wasted his punch.
He has learned politeness.
He has eat the pudding-bag.
He has eat too much pumpkin.
He 's full of piety.

R.

He 's rocky.
He 's raddled.
He 's rich.
He 's religious.
He 's ragged.
He 's raised.
He has lost his rudder.
He has been too far with Sir Richard.
He 's like a rat in trouble.

S.

He 's stitch'd.
He 's seafaring.
He 's in the suds.
He 's strong.
He 's been in the sun.
He 's as drunk as David's sow.
He 's swampt.
His skin is full.
He's steady.
He 's stiff.
He has burnt his shoulder.
He has got out his top-gallant sails.
He has seen the dog-star.
He 's stiff as a ringbolt.
He 's half seas over.
The shoe pinches him.
He is staggerish.
It is star light with him.
He carries too much sail.
He 'll soon out studding sails.
He 's stewed.
He 's stubbed.
He 's soaked.
He 's soft.
He has made too free with Sir John Strawberry.
He 's right before the wind, all sails out.
He has pawned his senses.
He plays parrot.
He has made shift of his shirt.
He shines like a blanket.
He has been paying for a sign.

T.

He 's toped.
He 's tongue-tied.
He 's tanned.

He 's tipsicum grave.
He 's double tongued.
He 's topsey turvey.
He 's tipsy.
He 's thawed.
He 's trammull'd.
He 's transported.
He has swallowed a tavern token.

V.

He makes Virginia fame.
He has got the Indian vapours.
He 's pot valiant.
He is in love with varany.

W.

He 's wise.
He 's a wet soul.
He has been to the salt water.
He has been in search of eye water.
He 's in the way to be weaned.
He 's out of the way.
He 's water soaked.
He 's wise or otherwise.
He can walk the line.
The wind is west with him.
He carries his wagon.

The phrases of the Dictionary are not, like most of our terms of art, borrowed from foreign or dead languages; neither are they collected from the writings of the learned; but gathered from domestic sources; no doubt many more might be added. I was almost tempted to add a new one under the letter B, to wit, *brutified*, but upon consideration I feared doing injustice to the brute creation, if I represented drunkenness as a beastly vice, since every one knows that the brutes are in general a sober sort of people.

This production (The Washing Day) has been generally ascribed to Dr. Franklin; though it has been also claimed for another gentleman. We have thought it fit to notice the circumstance, and its merit will be as good an apology as can be offered, should we be mistaken.

Singular custom among the Americans, entitled White-washing.

Dear Sir,

My wish is to give you some account of the people of these new states, but I am far from being qualified for the purpose, having as yet seen little more than the cities of New York and Philadelphia. I have discovered but few national singularities among them. Their customs and manners are nearly the same with those of England, which they have long been used to copy. For, previous to the revolution, the Americans were from their infancy taught to look up to the English as patterns of perfection in all things. I have observed, however, one custom, which, for aught I know, is peculiar to this country. An account of it will serve to fill up the remainder of this sheet, and may afford you some amusement.

When a young couple are about to enter into the matrimonial state, a never-failing article in the marriage-treaty is, that the lady shall have and enjoy the free and unmolested exercise of the rights of *white-washing*, with all its ceremonials, privileges, and appurtenances. A young woman would forego the most advantageous connexion, and even disappoint the warmest wish of her heart, rather than resign the invaluable right. You would wonder what this privilege of *white-washing* is: I will endeavour to give you some idea of the ceremony, as I have seen it performed.

There is no season of the year in which the lady may not claim her privilege, if she pleases; but the latter end of May is most generally fixed upon for the purpose. The attentive husband may judge by certain prognostics when the storm is nigh at hand. When the lady is unusually fretful, finds fault with the servants, is discontented with the children, and complains much of the filthiness of every thing about her—these are signs which ought not to be neglected; yet they are not decisive, as they sometimes come on and go off again, without producing any farther effect. But if, when the husband rises in the morning, he should observe in the yard a wheelbarrow with a quantity of lime in it, or should see certain buckets with lime dissolved in water, there is then no time to be lost; he immediately locks up the apartment or closet where his papers or his private property is kept, and putting the key in his pocket, betakes himself to flight: for a husband, however beloved, becomes a perfect nuisance during the season of female rage; his authority is superseded, his commission is suspended, and the very scullion, who cleans the brasses in the kitchen, becomes of more consideration and importance than him. He has nothing for it, but to abdicate, and run from an evil which he can neither prevent nor mollify.

The husband gone, the ceremony begins. The walls are in a few minutes stripped of their furniture: paintings, prints, and looking-glasses lie in a huddled heap about the floors; the curtains are torn from the testers, the beds crammed into the windows; chairs and tables, bedsteads and cradles, crowd the yard; and the garden fence bends beneath the weight of carpets, blankets, cloth cloaks, old coats, and ragged breeches. *Here* may be seen the lumber of the kitchen, forming a dark and confused mass: for the foreground of the picture, gridirons and frying pans, rusty shovels and broken tongs, spits and

pots, joint-stools, and the fractured remains of rush-bottomed chairs. *There*, a closet has disgorged its bowels, cracked tumblers, broken wine glasses, phials of forgotten physic, papers of unknown powders, seeds, and dried herbs, handfuls of old corks, tops of teapots, and stoppers of departed decanters;—from the rag-hole in the garret to the rat-hole in the cellar, no place escapes unrummaged. It would seem as if the day of general doom was come, and the utensils of the house were dragged forth to judgment. In this tempest, the words of Lear naturally present themselves, and might, with some alteration, be made strictly applicable:

——— "Let the great gods,
That keep this dreadful pudder o'er our heads,
Find out their enemies now. Tremble, thou wretch,
That hast within thee undivulged crimes
Unwhipt of justice!———
——— "Close pent-up guilt,
Raise your concealing continents, and ask
These dreadful summoners grace!"

This ceremony completed, and the house thoroughly evacuated, the next operation is to smear the walls and ceilings of every room and closet with brushes dipped in a solution of lime, called *white-wash*; to pour buckets of water over every floor, and scratch all the partitions and wainscots with rough brushes wet with soap-suds, and dipped in stone-cutter's sand. The windows by no means escape the general deluge. A servant scrambles out upon the pent-house, at the risk of her neck, and with a mug in her hand, and a bucket within reach, she dashes away innumerable gallons of water against the glass panes; to the great annoyance of the passengers in the street.

I have been told that an action at law was once brought against one of these water nymphs, by a person who had a new suit of clothes spoiled by this operation; but, after long argument, it was determined by the whole court, that the action would not lie, inasmuch as the defendant was in the exercise of a legal right, and not answerable for the consequences; and so the poor gentleman was doubly nonsuited; for he lost not only his suit of clothes, but his suit at law.

These smearings and scratchings, washings and dashings, being duly performed, the next ceremonial is to cleanse and replace the distracted furniture. You may have seen a house raising, or a ship-launch, when all the hands within reach are collected together: recollect, if you can, the hurry, bustle, confusion, and noise of such a scene, and you will have some idea of this cleaning match. The misfortune is, that the sole object is to make things clean; it matters not how many useful, ornamental, or valuable articles are mutilated, or suffer death under the operation: a mahogany chair and carved frame undergo the same discipline; they are to be made *clean* at all events; but their preservation is not worthy of attention. For instance, a fine large engraving is laid flat on the floor; smaller prints are piled upon it, and the superincumbent weight cracks the glasses of the lower tier: but this is of no consequence. A valuable picture is placed leaning against the sharp corner of a table; others are made to lean against that, until the pressure of the whole forces the corner of the table through the canvass of the first. The frame and glass of a fine print are to be *cleaned*; the spirit and oil used on this occasion are suffered to leak through and spoil the engraving; no matter, if the glass is clean, and the frame shine, it is sufficient; the rest is not worthy of consideration. An able arithmetician has made an accurate calculation, founded on long experience, and has discovered, that the losses and destruction incident to two white-washings are equal to one removal, and three removals equal to one fire.

The cleaning frolic over, matters begin to resume their pristine appearance. The storm abates, and all would be well again, but it is impossible that so great a convulsion, in so small a community, should not produce some farther effects. For two or three weeks after the operation, the family are usually afflicted with sore throats or sore eyes, occasioned by the caustic quality of the lime, or with severe colds from the exhalations of wet floors or damp walls.

I know a gentleman, who was fond of accounting for every thing in a philosophical way. He considers this, which I have called a custom, as a real periodical disease, peculiar to the climate. His train of reasoning is ingenious and whimsical; but I am not at leisure to give you a detail. The result was, that he found the distemper to be incurable; but after much study, he conceived he had discovered a method to divert the evil he could not subdue. For this purpose he caused a small building, about twelve feet square, to be erected in his garden, and furnished with some ordinary chairs and tables; and a few prints of the cheapest sort were hung against the walls. His hope was, that when the white-washing frenzy seized the females of his family, they might repair to this apartment, and scrub, and smear, and scour, to their heart's content; and so spend the violence of the disease in this outpost, while he enjoyed himself in quiet at head-quarters. But the experiment did not answer his expectation; it was impossible it should, since a principal part of the gratification consists in the lady's having an uncontrolled right to torment her husband at least once a year, and

to turn him out of doors, and take the reins of government into her own hands.

There is a much better contrivance than this of the philosopher; which is, to cover the walls of the house with paper; this is generally done, and though it cannot abolish, it at least shortens, the period of female dominion. The paper is decorated with flowers of various fancies, and made so ornamental, that the women have admitted the fashion without perceiving the design.

There is also another alleviation of the husband's distress; he generally has the privilege of a small room or closet for his books and papers, the key of which he is allowed to keep. This is considered as a privileged place, and stands like the land of Goshen amid the plagues of Egypt. But then he must be extremely cautious, and ever on his guard. For should he inadvertently go abroad and leave the key in his door, the housemaid, who is always on the watch for such an opportunity, immediately enters in triumph with buckets, brooms, and brushes; takes possession of the premises, and forthwith puts all his books and papers *to rights*: to his utter confusion, and sometimes serious detriment. For instance:

A gentleman was sued by the executors of a tradesman, on a charge found against him in the deceased's books, to the amount of £30. The defendant was strongly impressed with an idea that he had discharged the debt and taken a receipt; but, as the transaction was of long standing, he knew not where to find the receipt. The suit went on in course, and the time approached when judgment would be obtained against him. He then sat seriously down to examine a large bundle of old papers, which he had untied and displayed on a table for that purpose. In the midst of his search, he was suddenly called away on business of importance; he forgot to lock the door of his room. The house-maid, who had been long looking out for such an opportunity, immediately entered with the usual implements, and with great alacrity fell to cleaning the room, and putting things *to rights*. The first object that struck her eye was the confused situation of the papers on the table, these were without delay bundled together like so many dirty knives and forks; but in the action a small piece of paper fell unnoticed on the floor, which happened to be the very receipt in question: as it had no very respectable appearance, it was soon after swept out with the common dirt of the room, and carried in a rubbish pan into the yard. The tradesman had neglected to enter the credit in his book; the defendant could find nothing to obviate the charge, and so judgment went against him for the debt and costs. A fortnight after the whole was settled, and the money paid, one of the children found the receipt among the rubbish in the yard.

There is also another custom peculiar to the city of Philadelphia, and nearly allied to the former. I mean that of washing the pavement before the doors every Saturday evening. I at first took this to be a regulation of the police; but on a further inquiry find it is a religious rite, preparatory to the Sabbath; and is, I believe, the only religious rite in which the numerous sectaries of this city perfectly agree. The ceremony begins about sunset, and continues till about ten or eleven at night. It is very difficult for a stranger to walk the streets on those evenings; he runs a continual risk of having a bucket of dirty water thrown against his legs: but a Philadelphian born is so much accustomed to the danger, that he avoids it with surprising dexterity. It is from this circumstance that a Philadelphian may be known anywhere by his gait. The streets of New York are paved with rough stones; these indeed are not washed, but the dirt is so thoroughly swept from before the doors, that the stones stand up sharp and prominent, to the great inconvenience of those who are not accustomed to so rough a path. But habit reconciles every thing. It is diverting enough to see a Philadelphian at New York; he walks the streets with as much painful caution, as if his toes were covered with corns, or his feet lamed with the gout: while a New Yorker, as little approving the plain masonry of Philadelphia, shuffles along the pavement like a parrot on a mahogany table.

It must be acknowledged, that the ablutions I have mentioned are attended with no small inconvenience; but the women would not be induced, from any consideration, to resign their privilege. Notwithstanding this, I can give you the strongest assurances, that the women of America make the most faithful wives and the most attentive mothers in the world; and I am sure you will join me in opinion, that if a married man is made miserable only *one* week in a whole year, he will have no great cause to complain of the matrimonial bond.

I am, &c.

MISCELLANEOUS NOTES

ON

POLITICAL PUBLICATIONS PRIOR TO THE REVOLUTION,

COLLECTED

FROM THE AUTOGRAPH NOTES OF DR. FRANKLIN, AS MATERIALS FOR ARGUMENT OR REPLY.

Hints for a Reply to the Protests of certain Members of the House of Lords against the Repeal of the Stamp Act.

FIRST PROTEST.

We have submitted to your laws,—no proof of our acknowledgment of your power to make them; rather an acknowledgment of their reasonableness, or of our own weakness.—Post-office came as a matter of utility, —was aided by the legislature. Mean to take advantage of our ignorance. Children should not be imposed on; are not, even by honest shopkeepers. A great and magnanimous nation should disdain to govern by tricks and traps, that would disgrace a pettifogging attorney.

Settlement of the colonies stated. Parliament not consulted;—not till after the restoration, except by rebel Parliament.—Anxious about preserving the sovereignty of this country? Rather be so about preserving the liberty. We shall be so about the liberty of America, that your posterity may have a free country to come to, where they will be received with open arms.

King, the sovereign, cannot take in his Parliament; at least can give no greater power than he had himself.

Compliment the lords. Not a wiser or better body of men on earth. The deep respect impressed on me by the instance I have been witness to of their justice. They have been misled by misinformation. Proof of my opinion of their goodness, in the freedom with which I propose to examine their protests.

The trust of taxing America was never reposed by the people of America in the legislature of Great Britain. They had one kind of confidence, indeed, in that legislature,—that it would never attempt to tax them without their consent. The law was destructive of that confidence among them.

Other advantages of colonies besides commerce. Selfishness of commercial views.

The sovereignty of the crown I understand. The sovereignty of the British legislature out of Britain I do not understand.

The *fear* of being *thought weak* is a timidity and weakness of the worst sort, as it betrays into a persisting in errors, that may be much more mischievous, than the appearance of weakness. A great and powerful state, like this, has no cause for such timidity.

Acknowledging and correcting an error shows great magnanimity. Small states and small republics cannot afford to do so.

America not in the realm of England or Great Britain? No man in America thinks himself exempt from the jurisdiction of the crown, and of the assemblies, or has any such private judgment.

The agitation of the question of rights makes it now necessary to settle a constitution for the colonies. Restrictions should be only for the general good. Endeavour to convince reasonable creatures by reason. Try your hands with me.

—— Never think of it. They are reasonable creatures. Reasonable laws will not require force.

* In the Athenæum at Philadelphia are many volumes of pamphlets, which formerly belonged to Dr Franklin. Some of these are curious from the manuscript notes they contain in the margin. A few specimens have been selected for publication, both as having an historical interest, and as being peculiarly characteristic of their author.

It should here also be observed, that the notes contained in these pamphlets were penned at the very time when he was supposed, by some persons either unfriendly to his character or ignorant of his motives, to be secretly acting a part in England more accordant to his private aims, than to the high duties of a true lover of his country. From the tone, temper, and substance of these notes, let the reader judge with what justice such suspicions have been entertained, and such insinuations hazarded to the public. As mere private records of his thoughts prompted by the impulse of the moment, without any design of their ever seeing the light, they must be admitted to reveal his true sentiments, and to exhibit the unbiassed workings of his mind.

The above "Hints" are found in the margin of Dr. Franklin's printed copy of the *Protests*, written at the time (1766), from which it would appear that it was his intention to make a formal answer to these Protests. This purpose, it is believed, was never executed.

I observe two or three Scotch lords protest. Many more voted against the repeal. Colonies settled before the union. Query; If the Parliament had a jurisdiction over the colonies by the first settlement, had they a right to introduce new legislators? Could they sell or commute the right with other nations? Can they introduce the peers of Ireland and Commons, and the States of Holland, and make them legislators of the colonies? How could Scotland acquire a right to legislation over English colonies, but by consent of the colonies themselves?

I am a subject of the crown of Great Britain,—have ever been a loyal one,—have partaken of its favours. I write here with freedom, relying on the magnanimity of Parliament. I say nothing to your lordships, that I have not been indulged to say to the Commons. Your lordships' names are to your Protest, therefore I think I ought to put mine to the answer.—Desire what I have said may not be imputed to the colonies. I am a private person, and do not write by their direction. I am over here to solicit, in behalf of my colony, a closer communication with the crown.

SECOND PROTEST.

Talk with Bollan on this head. Query; Courts of common law? Particular colonies drained,—all drained, as it would all come home. Those, that would pay most of the tax, would have least of it spent at home. It must go to the conquered colonies. The view of maps deceives.

All breach of the constitution. Juries better be trusted. Have rather an interest in suppressing smugglers. Nature of smuggling. It is picking of pockets. All oppressions take their rise from some plea of utility; often in appearance only.

The clamour of multitudes. It is good to attend to it. It is wiser to foresee and avoid it. It is wise, when neither foreseen nor avoided, to correct the measures that give occasion to it. Glad the majority have that wisdom.

Wish your lordships had attended to that other great article of the palladium; "Taxes shall not be laid but by *common consent* in Parliament." We Americans were not here to give our consent.

My duty to the king, and justice to my country, will, I hope, justify me, if I likewise *protest*, which I now do with all humility in behalf of myself and of every American, and of our posterity, against your Declaratory Bill, that the Parliament of Great Britain has not, never had, and of right never can have, without consent, given either before or after, power to make laws of sufficient force to bind the subjects in America in any case whatever, and particularly in taxation.

I can only judge of others by myself. I have some little property in America. I will freely spend nineteen shillings in the pound to defend my right of giving or refusing the other shilling; and, after all, if I cannot defend that right, I can retire cheerfully with my little family into the boundless woods of America, which are sure to afford freedom and subsistence to any man, who can bait a hook, or pull a trigger.

OBSERVATIONS

ON

PASSAGES IN A PAMPHLET ENTITLED "GOOD HUMOUR, OR A WAY WITH THE COLONIES.—LONDON 1766."*

"The reply of the Governor of Massachusetts to the assembly's answer is in the same consistent style; and affords still a stronger proof, as well as of his own ingenuity, honour, and integrity, as of the furious and enthusiastic spirit of the province."

They knew the governor to be, as it afterward's turned out, their enemy and calumniator in private letters to government here.

"It had been more becoming the state of the colonies, always dear to Britain, and ever cherished and defended by it, to have remonstrated in terms of filial duty and obedience."

How ignorant is this writer of facts! How many of their remonstrances were rejected!

"They must give us leave in our turn to ex-

* The passages included within quotation marks are extracts from the pamphlet, and the sentence following each contains Dr. Franklin's observations.

cept against their demonstration of legal exemption."

There never was any occasion of legal exemption from what they never had been subject to.

"But then it is to be further observed, that this same method of arguing is equally favourable to governors as governed, and to the mother country as the colonies."

Here is the old mistake of all these writers. The people of the mother country are subjects, not governors. The king only is sovereign in both countries.

"The colonies will no longer think it equitable to insist upon immunities which the people of Great Britain do not enjoy."

Why not, if they have a right to them?

"To claim a right of being taxed by their assemblies only, appears to have too much the air of independence; and though they are not represented here, would give them an immunity beyond the inhabitants of this island."

It is a right, however; what signifies what *air* it has? The inhabitants being freeholders ought to have the same. If they have it not, they are injured. Then rectify what is amiss among yourselves; and do not make it a justification of more wrong.

"Or could they hope to procure any advantages from one hundred representatives? Common sense answers all this in the negative."

Why not, as well as Scotland from forty-five, or rather sixty-one? Common sense on the contrary, says, that a body of one hundred votes in Parliament will always be worth the attention of any ministry; and the fear of offending them will make every minister cautious of injuring the rights of their country, lest they join with his opposers in Parliament.

"Therefore the interest of Great Britain and that of the colonies is the same."

All this argument of the interest of Britain and the colonies being the *same* is fallacious and unsatisfactory. Partners in trade have a *common* interest, which is the same, the flourishing of the partnership business; but they may, moreover, have each a *separate* interest, and, in pursuit of that *separate* interest, one of them may endeavour to impose on the other, may cheat him in the accounts, may draw to himself more than his share of the profits, may put upon the other more than an equal share of the expense and burden. Their having a common interest is no security against such injustice. The landholders of Great Britain have a common interest, and yet they injure one another in the inequality of the land tax. The majority in Parliament, being favoured in the proportions, will never consent to do justice to the minority by a more equal assessment.

"But what reasonable ground of apprehension can there be, that the British Parliament should be ignorant of so plain a matter, as that the interests of Britain and the colonies are the same?"

If the Parliament is so knowing and so just, how comes it to restrain Ireland in its manufactures, America in its trade? Why may not an Irishman or an American make the same manufactures, and carry them to the same ports as an Englishman? In many instances Britain shows a selfish regard to her own interest, in prejudice of the colonies. America therefore has no confidence in her equity.

"But I can conceive no earthly security better, none indeed so good, as that which depends upon the wisdom and integrity of a British king and Parliament."

Suppose seats in your House of Commons hereditary, as those of the House of Lords; or suppose the Commons to be nominated by the king, or chosen by the lords; could you then rely upon them? If your members were to be chosen by the people of Ireland, could you then rely upon them? Could you depend upon their wisdom and integrity, as a security, the best possible, for your rights? And wherein is our case different, if the people of England choose legislators for the people of America?

"If they have a spark of virtue left, they will blush to be found in a posture of hostility against Great Britain."

There was no posture of hostility in America, but Britain put herself in a posture of hostility against America. Witness the landing of the troops in Boston, 1768.

OBSERVATIONS

ON

PASSAGES IN "A LETTER FROM A MERCHANT IN LONDON TO HIS NEPHEW IN NORTH AMERICA.—LONDON, 1766."

"THE honest indignation you express against those artifices and frauds, those robberies and insults, which lost us the hearts and affections of the Indians, is particularly to be commended; for these were the things, as you justly observed, which involved us in the most bloody and expensive war that ever was known."

This is wickedly intended by the author, Dean Tucker, to represent the North Americans as the cause of the war. Whereas, it was in fact begun by the French, who seized the goods and persons of the English traders on the Ohio, who encroached on the king's land in Nova Scotia, and took a fort from the Ohio Company by force of arms, which induced England to make reprisals at sea, and to send Braddock to recover the fort on the Ohio, whence came on the war.

"By the spirit of Magna Charta all taxes laid on by Parliament are constitutional, legal taxes."

There is no doubt but taxes laid by Parliament, where the Parliament has jurisdiction, are legal taxes; but does it follow, that taxes laid by the Parliament of England on Scotland before the union, on Guernsey, Jersey, Ireland, Hanover, or any other dominions of the crown, not within the realm, are therefore legal? These writers against the colonies all bewilder themselves by supposing the colonies within the realm, which is not the case, nor ever was. This then is the *spirit* of the constitution, that taxes shall not be laid without the consent of those to be taxed. The colonies were not then in being, and therefore nothing relating to them could be *literally* expressed. As the Americans are now *without* the realm, and not of the jurisdiction of Parliament, the spirit of the British constitution dictates, that they should be taxed only by *their own* representatives, as the English are by theirs.

"Now the first emigrants, who settled in America, were certainly English subjects, subject to the laws and jurisdiction of Parliament, and consequently to parliamentary taxes, before the emigration, and therefore subject afterwards, unless some legal constitutional exemption can be produced."

This position supposes, that Englishmen can never be out of the jurisdiction of Parliament. It may as well be said, that wherever an Englishman resides, that country is *England*. While an Englishman resides in England, he is undoubtedly subject to its laws. If he goes into a foreign country, he is subject to the laws and government he finds there. If he finds no government or laws there, he is subject there to none, till he and his companions, if he has any, make laws for themselves; and this was the case of the first settlers in America. Otherwise, and if they carried the English laws and power of Parliament with them, what advantage could the Puritans propose to themselves by going, since they would have been as subject to bishops, spiritual courts, tythes, and statutes relating to the church, in America, as in England? Can the dean, on his principles, tell how it happens that those laws, the game acts, the statutes for labourers, and an infinity of others, made before and since the emigration, are not in force in force in America, nor ever were?

"Now, upon the first settling of an English colony, and before ever you Americans could have chosen any representatives, and therefore before any assembly of such representatives could have possibly met,—to whose laws and to what legislative power were you then subject? To the English, most undoubtedly; for you could have been subject to no other."

The author here appears quite ignorant of the fact. The colonies carried no law with them; they carried only a power of making laws, or adopting such parts of the English law or any other law, as they should think suitable to their circumstances. The first settlers of Connecticut, for instance, at their first meeting in that country, finding themselves out of all jurisdiction of other governments, resolved and enacted, that, till a code of laws should be prepared and agreed to, they would be governed by *the law of Moses*, as contained in the Old Testament.

If the first settlers had no right to expect a better constitution than the English, what fools were they for going over, to encounter all the hardships and perils of new settlements in a wilderness! For these were so many additions to what they suffered at home from tyrannical and oppressive institutions in church and state; with a subtrac-

tion of all their old enjoyments of the conveniences and comforts of an old settled country, friends, neighbours, relations, and homes.

"Suppose, therefore, that the crown had been so ill advised as to have granted a charter to any city or county here in England, pretending to exempt them from *the power and jurisdiction of an British Parliament.* Is it possible for you to believe an absurdity so gross and glaring?"

The American settlers *needed no exemption* from the power of Parliament; they were necessarily exempted, as soon as they landed out of its jurisdiction. Therefore, all this rhetorical paragraph is founded on a mistake of the author, and the absurdity he talks of is of his own making.

"Good heavens! what a sudden alteration is this! An American pleading for the extension of the prerogative of the crown! Yes, if it could make for his cause; and for extending it, too, beyond all the bounds of the law, of reason, and of common sense!"

What stuff! Why may not an American plead for the just prerogatives of the crown? And is it not a just prerogative of the crown to give the subjects leave to settle in a foreign country, if they think it necessary to ask such leave? Was the Parliament at all considered, or consulted, in making those first settlements? Or did any lawyer then think it necessary?

"Now this clause, which is nothing more than the renunciation of absolute prerogative, is quoted in our newspapers, as if it was a renunciation of the rights of Parliament to raise taxes."

It was not a renunciation of the rights of Parliament. There was no need of such a renunciation, for Parliament had not even pretended to such a right. But, since the royal faith was pledged by the king for himself and his successors, how can any succeeding king, without violating that faith, ever give his assent to an act of Parliament for such taxation.

"Nay, many of your colony charters assert quite the contrary, by containing the express reservations of parliamentary rights, particularly that great one of levying taxes."

A fib, Mr. Dean. In one charter *only*, and that a late one, is the Parliament mentioned; and the right reserved is only that of laying duties on commodities imported into England from the colony or exported to it.

"And those charters, which do not make such provisions in express terms, must be supposed virtually to imply them; because the law and constitution will not allow, that the king can do more either at home or abroad by the prerogative royal, than the law and constitution authorizes him to do."

Suppositions and *implications* will not weigh in these important cases. No law or constitution forbade the king's doing what he did in granting those charters.

"Confuted, most undoubtedly, you are beyond the possibility of a reply, as far as the law and constitution of the realm are concerned in this question."

This is hallooing before you are out of the wood.

"Strange, that though the British Parliament has been, from the beginning, thus unreasonable, thus unjust and cruel towards you, by levying taxes on many commodities outwards and inwards"—

False! Never before the restoration. The Parliament, it is acknowledged, have made many oppressive laws relating to America, which have passed without opposition, partly through the weakness of the colonies, partly through their inattention to the full extent of their rights, while employed in labour to procure the necessaries of life. But that is a wicked guardian, and a shameless one, who first takes advantage of the weakness incident to minority, cheats and imposes on his pupil, and when the pupil comes of age, urges those very impositions as precedents to justify continuing them and adding others.

"But surely you will not dare to say, that we refuse your votes when you come hither to offer them, and choose to poll. You cannot have the face to assert that on an election-day any difference is put between the vote of a man born in America, and of one born here in England."

This is all banter and insult, when you know the impossibility of a million of freeholders coming over sea to vote here. If their freeholds in America are within the realm, why have they not, in virtue of these freeholds, a right to vote in your elections, as well as an English freeholder? Sometimes we are told, that our estates are by our charters all in the manor of East Greenwich, and therefore all in England; and yet have we any right to vote among the voters of East Greenwich? Can we trade to the same ports? In this very paragraph, you suppose that we cannot vote in England, if we come hither, till we have by purchase acquired a right; therefore neither we nor our estates are represented in England.

"The cause of your complaint is this; that you live at too great a distance from the mother country to be present at our English elections; and that, in consequence of this distance, the freedom of our towns, or the freeholds in our counties, as far as voting is concerned, are not worth attending to. It may be so; but pray consider, if you yourselves choose to make it inconvenient for you to come and vote, by re-

tiring into distant countries,—what is that to us?"

This is all beside the mark. The Americans are by their constitutions provided with a representation, and therefore neither need nor desire any in the British Parliament. They have never asked any such thing. They only say, Since we have a right to grant our own money to the king, since we have assemblies where we are represented for such purposes, why will you meddle, out of your sphere, take the money that is ours, and give us yours, without our consent?

"Yes, it is, and you demand it too with a loud voice, full of anger, of defiance, and denunciation."

An absolute falsehood! We never demanded in any manner, much less in the manner you mention, that the mother country should change her constitution.

"In the great metropolis, and in many other cities, landed property itself hath no representative in Parliament. Copy-holds and lease-holds of various kinds have none likewise, though of ever so great a value."

Copy-holds and lease-holds are supposed to be represented in the original landlord of whom they are held. Thus all the land in England is in fact represented, notwithstanding what he here says. As to those who have no landed property in a county, the allowing them to vote for legislators is an impropriety. They are transient inhabitants, and not so connected with the welfare of the state, which they may quit when they please, as to qualify them properly for such privilege.

"And, besides all this, it is well known that the East India Company, which have such vast settlements, and which dispose of the fate of kings and kingdoms abroad, have not so much as a single member, or even a single vote, *quatenus* a company, to watch over their interests at home. And may not their property, perhaps a little short of one hundred millions sterling, as much deserve to be represented in Parliament, as the scattered townships or straggling houses of some of your provinces in America?"

By this argument it may be proved, that no man in England has a vote. The clergy have none as clergymen; the lawyers, none as lawyers; the physicians, none as physicians; and so on. But if they have votes as freeholders, that is sufficient; and that no freeholder in America has for a representative in the British Parliament. The stockholders are many of them foreigners, and all may be so when they please, as nothing is more easy than the transferring of stock and conveying property beyond sea by bills of exchange. Such uncertain subjects are, therefore, not properly vested w th rights relating to government.

——"Yet we raise no commotions; we neither ring the alarm-bell, nor sound the trumpet, and submit to be taxed without being represented; and taxed, let me tell you, for your sakes. All was granted when you cried for help."

This is wickedly false. While the colonies were weak and poor, not a penny or a single soldier was ever spared by Britain for their defence. But as soon as the trade with them became an object, and a fear arose that the French would seize that trade and deprive her of it, she sent troops to America *unasked*. And she now brings this account of the expense against us, which should be rather carried to her own merchants and manufacturers. We joined our troops and treasure with hers to help her in this war. Of this no notice is taken. To refuse to pay a just debt is knavish; not to return an obligation is ingratitude; but to demand payment of a debt where none has been contracted, to forge a bond or an obligation in order to demand what was never due, is villany. Every year both king and Parliament, during the war, acknowledged that we had done more than our part, and made us some return, which is equivalent to a receipt in full, and entirely sets aside this monstrous claim.

By all means redress your own grievances. If you are not just to your own people, how can we trust you? We ask no representation among you; but if you have any thing wrong among yourselves, rectify it, and do not make one injustice a precedent and plea for doing another. That would be increasing evil in the world instead of diminishing it.

You need not be concerned about the number to be added from America. We do not desire to come among you; but you may make some room for your own additional members, by removing those that are sent by the rotten boroughs.

"I must now tell you, that every member of Parliament represents you, and me, and our interests in all essential points, just as much as if we had voted for him. For although one place or one set of men may elect and send him up to Parliament, yet, when once he becomes a member, he is the equal guardian of all."

In the same manner, Mr. Dean, are the pope and cardinals representatives of the whole Christian church. Why don't you obey them?

"This, then, being the case, it therefore follows, that our Birminghams, Manchesters, Leeds, Halifaxes, &c. and your Bostons, New-Yorks, and Philadelphias, are as really, though not so nominally, represented, as any part what-

soever of the British empire; and that each of these places have in fact, instead of one or two, not less than five hundred and fifty-eight guardians in the British Senate."

What occasion is there then, my dear sir, of being at the trouble of elections? The peers alone would do as well for our guardians, though chosen by the king, or born such. If their present number is too small, his majesty may be good enough to add five hundred and fifty-eight, or make the present House of Commons and their heirs-male peers for ever. If having a vote in elections would be of no use to us, how is it of any to you? Elections are the cause of much tumult, riot, contention, and mischief. Get rid of them at once, and for ever.

—— "It proves that no man ought to pay any tax but that only to which the member of his own town, city, or county hath particularly assented."

You seem to take your nephew for a simpleton, Mr. Dean. Every one, who votes for a representative, knows and intends, that the majority is to govern, and that the consent of the majority is to be understood as the consent of the whole; that being ever the case in all deliberative assemblies.

"The doctrine of implication is the very thing to which you object, and against which you have raised so many batteries of popular noise and clamour."

How far, my dear sir, would you yourself carry the doctrine of implication? If important positions are to be implied, when not expressed, I suppose you can have no objection to their being implied where some expression countenances the implication. If you should say to a friend, "I am your humble servant, sir," ought he to imply from thence that you will clean his shoes?

"And consequently you must maintain, that all those in your several provinces who have no votes," &c.

No freeholder in North America is without a vote. Many, who have no freeholds, have nevertheless a vote; *which, indeed, I don't think was necessary to be allowed.*

"You have your choice whether you will accept of my price for your tobacco; or, after bringing it here, whether you will carry it away, and try your fortune at another market."

A great kindness this, to oblige me first to bring it here, that the expense of another voyage and freight may deter me from carrying it away, and oblige me to take the price you are pleased to offer.

"But I have no alternative allowed, being obliged to buy yours at your own price, or else to pay such a duty for the tobacco of other countries, as must amount to a prohibition. Nay, in order to favour your plantations, I am not permitted to plant this herb on my own estate, though the soil should be ever so proper for it."

You lay a duty on the tobacco of other countries, because you must pay money for that, but get ours in exchange for your manufactures.

Tobacco is not permitted to be planted in England, lest it should interfere with corn necessary for your subsistence. Rice you cannot raise. It requires eleven months. Your summer is too short. Nature, not the laws, denies you this product.

"And what will you say in relation to hemp? The Parliament now gives you a bounty of eight pounds per ton for exporting your hemp from North America, but will allow me nothing for growing it here in England."

Did ever any North American bring his hemp to England for this bounty? We have yet not enough for our own consumption. We begin to make our own cordage. You want to suppress that manufacture, and would do it by getting the raw material from us. You want to be supplied with hemp for your manufactures, and Russia demands money. These were the motives for giving what you are pleased to call a *bounty* to us. We thank you for your bounties. We love you, and therefore must be obliged to you for being good to yourselves. You do not encourage raising hemp in England, because you know it impoverishes the richest grounds; your landholders are all against it. What you call bounties given by Parliament and the society, are nothing more than inducements offered us, to persuade us to leave employments that are more profitable, and engage in such as would be less so without your bounty; to quit a business profitable to ourselves, and engage in one that shall be profitable to you. This is the true spirit of all your bounties.

Your duties on foreign articles are from the same motives. Pitch, tar, and turpentine used to cost you five pounds a barrel when you had them from foreigners, who used you ill into the bargain, thinking you could not do without them. You gave a bounty of five shillings a barrel to the colonies, and they have brought you such plenty as to reduce the price to ten shillings a barrel. Take back your bounties when you please, since you upbraid us with them. Buy your indigo, pitch, silk, and tobacco where you please, and let us buy our manufactures where we please. I fancy we shall be gainers. As to the great kindness of these five hundred and fifty-eight parliamentary guardians of American privileges, who can forbear smiling, that has seen the Navigation Act, the Hatters' Act, the Steel-

Hammer and Slit-Iron Act, and numberless others restraining our trade, obstructing our manufactures, and forbidding us the use of the gifts of God and nature. Hopeful guardians, truly! Can it be imagined, that, if we had a reasonable share in electing them, from time to time, they would thus have used us!

—— "And must have seen abundant reason before this time to have altered your former hasty and rash opinion."

We see in you abundance of self-conceit, but no convincing argument.

"Have you no concerts or assemblies, no play-houses or gaming-houses, now subsisting? Have you put down your horse-races and other such like sports and diversions? And is the luxury of your tables, and the variety and profusion of your wines and liquors, quite banished from among you?"

This should be a caution to Americans, how they indulge for the future in British luxuries. See here British generosity! The people, who have made you poor by their worthless, I mean useless, commodities, would now make you poorer by taxing you; and from the very inability you have brought on yourselves, by a partiality for their fashions and modes of living, of which they have had the whole profit, would now urge your ability to pay the taxes they are pleased to impose. Reject, then, their commerce as well as their pretended power of taxing. Be frugal and industrious, and you will be free. The luxury of your tables, which could be known to the English only by your hospitably entertaining them, is by these grateful guests now made a charge against you, and given as a reason for taxing you.

"Be it also allowed, as it is commonly asserted, that the public debt of the several provinces amounts to eight hundred thousand pounds sterling."

I have heard, Mr. Dean, that you have studied political arithmetic more than divinity, but, by this sample of it, I fear to very little purpose. If personal service were the matter in question, out of so many millions of souls, so many men might be expected, whether here or in America. But when raising money is the question, it is not the number of souls, but the wealth in possession, that shows the ability. If we were twice as numerous as the people of England, it would not follow that we are half as able. There are numbers of single estates in England, each worth a hundred of the best of ours in North America. The city of London alone is worth all the provinces of North America.

"When each of us pays, one with another, twenty shillings per head, we expect that each of you should pay the sum of one shilling! Blush, blush, for shame at your perverse and scandalous behaviour!"

Blush for shame at your own ignorance, Mr. Dean, who do not know, that the colonies have taxes, and heavy ones of their own to pay, to support their own civil and military establishments; and that the shillings should not be reckoned upon heads, but upon pounds. There never was a sillier argument.

"Witness our county taxes, militia taxes, poor taxes, vagrant taxes, bridge taxes, high-road and turnpike taxes, watch taxes, lamp and scavenger taxes, &c. &c. &c."

And have we not all these taxes too, as well as you, and our provincial or public taxes besides? And over and above, have we not new roads to make, new bridges to build, churches and colleges to found, and a number of other things to do, that your fathers have done for you, and which you inherit from them, but which we are obliged to pay for out of our present labour?

"We require of you to contribute only one shilling to every twenty from each of us. Yes, and this shilling too to be spent in your own country, for the support of your own civil and military establishments."

How fond he is of this one shilling and twenty. Who has desired this of you, and who can trust you to lay it out? If you are thus to provide for our civil and military establishments, what use will there afterwards be for our assemblies?

"And yet, small and inconsiderable as this share is, you will not pay it. No, you will not! and it is at our peril if we demand it!

No! we will pay nothing on compulsion.

"For how, and in what manner, do you prove your allegations? Why truly by breaking forth into riots and insurrections, and by committing every kind of violence that can cause trade to stagnate, and industry to cease."

The Americans never brought riots as arguments. It is unjust to charge two or three riots in particular places upon all America. Look for arguments in the petitions and remonstrances of the *assemblies*, who detest riots, of which there are ten in England for one in America.

"Perhaps you meant to insinuate (though it was prudence in you not to speak out), that the late act was ill-contrived and ill-timed, because it was made at a juncture when neither the French were in your rear to frighten, nor the English fleets and armies on your front to force you to a compliance."

It seems a prevailing opinion in England, that fear of their French neighbours would have kept the colonies in obedience to the

Parliament, and that if the French power had not been subdued, no opposition would have been made to the Stamp Act. A very groundless notion. On the contrary, had the French power continued, to which the Americans might have had recourse in the case of oppression from Parliament, Parliament would not have dared to oppose them. It was the employment of fifty thousand men by land and a fleet on the coast, for five years, to subdue the French only. Half the land army were provincials. Suppose the British twenty-five thousand had acted by themselves, with all the colonies against them; what time would it have taken to subdue the whole?

"Or shall we give you entirely up, unless you will submit to be governed by the same laws as we are, and pay something towards maintaining yourselves?"

The impudence of this language to colonies, who have *ever* maintained themselves, is astonishing! Except the *late attempted* colonies of Nova Scotia and Georgia, no colony ever received maintenance in any shape from Britain; and the grants to those colonies were mere jobs for the benefit of ministerial favourites, *English* or *Scotchmen*.

"Whether we are to give you entirely up, and, after having obliged you to pay your debts, whether we are to have no further connexion with you as a dependent state or colony"—

Throughout all America English debts are more easily recovered than in England, the process being shorter and less expensive, and land subject to execution for the payment of debts. Evidence, taken *ex parte* in England, to prove a debt, is allowed in their courts, and during the whole dispute there was *not one single instance* of any English merchant's meeting with the least obstruction in any process or suit commenced there for that purpose.

"Externally, by being severed from the British empire, you will be excluded from cutting logwood in the bays of Campeachy and Honduras, from fishing on the banks of Newfoundland, on the coast of Labrador, or in the bay of St. Lawrence, &c."

We have no use for logwood, but to remit it for your fineries. We joined in conquering the Bay of St. Lawrence and its dependencies. As to the Sugar Islands, if you won't allow us to trade with them, perhaps you will allow them to trade with us; or do you intend to starve them? Pray keep your bounties, and let us hear no more of them;—and your troops, who never protected us against the savages, nor are fit for such a service;—and the three hundred thousand pounds, which you seem to think so much clear profit to us, when, in fact, they never spend a penny among us, but they have for it from us a penny's worth. The manufactures they buy are brought from you; the provisions we could, as we always did, sell elsewhere for as much money. Holland, France, and Spain would all be glad of our custom, and pleased to see the separation.

"And after all, and in spite of any thing you can do, we in Britain shall still retain the greatest part of your European trade, because we shall give a better price for many of your commodities, than you can have any where else, and we shall sell to you several of our manufactures, especially in the woollen-stuff and metal way, on cheaper terms."

Oho! Then you will still trade with us! But can that be without our trading with you? And how can you buy our oil, if we catch no whales?

"The leaders of your parties will then be setting all their engines to work, to make fools become the dupes of fools."

Just as they do in England.

"And instead of having troops to defend them, and those troops paid by Great Britain, they must defend themselves, and pay themselves."

To defend them!—To oppress, insult, and murder them, as at Boston!

"Not to mention that the expenses of your civil governments will be necessarily increased; and that a fleet more or less must belong to each province for guarding their coasts, insuring the payment of duties, and the like."

These evils are all imaginations of the author. The same were predicted to the Netherlands, but have never yet happened. But suppose all of them together, and many more, it would be better to bear them than submit to parliamentary taxation. We might still have something we could call our own. But, under the power claimed by Parliament, we have not a single sixpence.

The author of this pamphlet, Dean Tucker, has always been haunted with the fear of the seat of government being soon to be removed to America. He has, in his Tracts on Commerce, some just notions in matters of trade and police, mixed with many wild and chimerical fancies totally impracticable. He once proposed, as a defence of the colonies, to clear the woods for the width of a mile all along behind them, that the Indians might not be able to cross the cleared part without being seen; forgetting that there is a night in every twenty-four hours.

OBSERVATIONS

ON

PASSAGES IN "AN INQUIRY INTO THE NATURE AND CAUSES OF THE DISPUTES BETWEEN THE BRITISH COLONIES IN AMERICA AND THEIR MOTHER COUNTRY.—LONDON, 1769."

"SUPREME power and authority must not, cannot, reside equally every where throughout an empire."

Writers on this subject often confuse themselves with the idea, that all the king's dominions make one state, which they do not, nor ever did since the conquest. Our kings have ever had dominions not subject to the English parliament. At first the provinces of France, of which Jersey and Guernsey remain, always governed by their own laws, appealing to the king in Council only, and not to our courts or the House of Lords. Scotland was in the same situation before the union. It had the same king, but a separate Parliament, and the Parliament of England had no jurisdiction over it. Ireland the same in truth, though the British Parliament has *usurped* a dominion over it. The colonies were originally settled in the idea of such extrinsic dominions of the king, and of the king only. Hanover is now such a dominion.

"If each Assembly, in this case, were absolute, they would, it is evident, form not one only, but so many different governments perfectly independent of one another."

This is the only clear idea of their real present condition. Their only bond of union is the king.

"Now that of Great Britain being exactly the kind of government I have been speaking of, the absolute impossibility of vesting the American Assemblies with an authority in all respects equal to that of the mother country, without actually dismembering the British empire, must naturally occur to every one."

It would not be dismembering it, if it never was united, as in truth, it never yet has been. Breaking the present union between England and Scotland would be dismembering the empire; but no such union has yet been formed between Britain and the colonies.

"Where divers remote and distant countries are united under one government, an equal and fair representation becomes almost impracticable, or, at least, extremely inconvenient."

Here appears the excellency of the invention of colony government, by separate, independent legislatures. By this means, the remotest parts of a great empire may be as well governed as the centre; misrule, oppressions of proconsuls, and discontents and rebellions thence arising, prevented. By this means the power of a king may be extended without inconvenience over territories of any dimensions, how great soever. America was thus happily governed in all its different and remote settlements, by the crown and their own Assemblies, till the new politics took place of governing it by one Parliament, which have not succeeded and never will.

"Should we carry our supposition much farther, the inconveniences attending such long journeys would be very great, although not interrupted by water."

Water, so far from being an obstruction, is a means of facilitating such assemblies from distant countries. A voyage of three thousand miles by sea is more easily performed than a journey of one thousand by land.

It is, in my opinion, by no means impracticable to bring representatives conveniently from America to Britain; but I think the present mode of letting them govern themselves by their own Assemblies much preferable. They will always be better governed; and the Parliament has business enough here with its own internal concerns.

——"Whether they should not be allowed such a form of government, as will best secure to them their just rights and natural liberties."

They have it already. All the difficulties have arisen from the British Parliament attempting to deprive them of it.

"Is it not, let me ask, most egregious folly, so loudly to condemn the Stuart family, who would have governed England without a Parliament, when at the same time we would, almost all of us, govern America upon principles not at all more justifiable!"

Very just. Only that the arbitrary government of a single person is more eligible, than the arbitrary government of a body of men. A single man may be afraid or ashamed of doing injustice; a body is never either one or the other, if it is strong enough.

It cannot apprehend assassination, and by dividing the shame among them, it is so little apiece that no one minds it.

—— "And consistently with our rights of sovereignty over them."

I am surprised, that a writer, who, in other respects, appears often very reasonable, should talk of *our sovereignty* over the colonies! As if every individual in England was a part of a sovereign over America! The king is the sovereign of all.

The Americans think, that, while they can retain the right of disposing of their own money, they shall thereby secure all their other rights. They have, therefore, not yet disputed your other pretensions.

"That England has an undeniable right to consider America as a part of her dominions is a fact, I presume, which can never be questioned."

You do, indeed, *presume* too much. America *is not* part of the dominions of *England*, but of *the king's dominion*. England is a dominion itself, and has no dominions.

"I will only observe at present, that it was England, in some sense, which at first gave them being."

In some sense! In what sense? They were not planted at her expense. As to defence, all parts of the king's dominion have mutually always contributed to the defence one of the other. The man in America, who contributes sixpence towards an armament against the common enemy, contributes as much to the common protection as if he lived in England.

They have always been ready to contribute, but by voluntary grants according to their rights; nor has any Englishman yet had the effrontery to deny this truth.

"If they are at liberty to choose what sums to raise, as well as the manner of raising them, it is scarcely to be doubted, that their allowance will be found extremely short. And it is evident they may, upon this footing, absolutely refuse to pay any taxes at all. And if so, it would be much better for England, if it were consistent with her safety, to disclaim all further connexion with them, than to continue her protection to them wholly at her own expense."

Why is it to be doubted, that they will not grant what they ought to grant? No complaint was ever yet made of their refusal or deficiency. He says, if they are not without reserve obliged to comply with the requisitions of the ministry, they may absolutely refuse to pay any taxes at all. Let him apply this to the British Parliament, and the reasoning will equally prove, that the Commons ought likewise to comply absolutely with the requisitions of the ministry. Yet I have seen lately the ministry demand four shillings in the pound, and the Parliament grant but three. But Parliaments and provincial Assemblies may always be safely trusted with this power of refusing or granting in part. Ministers will often demand too much. But Assemblies, being acquainted properly with the occasion, will always grant what is necessary. As protection is, as I said before, mutual and equal in proportion to every man's property, the colonies have been drawn into all British wars, and have annoyed the enemies of Britain as much in proportion as any other subjects of the king, equal in numbers and property. Therefore, this account has always balanced itself.

"It may further be observed, that their proceedings are not quite so rapid and precipitate as those of the Privy Council; so that, should it be found unnecessary, they will have more time to petition or make remonstrances. For this privilege, the least which a subject can enjoy, is not to be denied them."

Late experience has fully shown, that American petitions and remonstrances are little regarded in Britain. The privilege of petitioning has been attempted to be wrested from them. The Assemblies uniting to petition has been called *a flagitious attempt* in the ministers' letters; and such Assemblies as would persist in it have therefore been dissolved.

It is a joke to talk thus to us, when we know that Parliament, so far from solemnly canvassing our petitions, has refused to receive or read them.

"Our right of legislation over the Americans, unrepresented as they are, is the point in question. This right is asserted by most, doubted of by some, and wholly disclaimed by a few."

I am one of those few; but am persuaded the time is not far distant, when the few will become the many; for, *Magna est veritas et prevalebit*.

"But, to put the matter in a stronger light, the question, I think, should be whether we have a general right of making slaves, or not."

A very proper state of the question.

"And the Americans may be treated with as much equity, and even tenderness, by the Parliament of Great Britain, as by their own Assemblies. This, at least, is possible, though perhaps not very probable."

How can we Americans believe this, when we see almost half the nation paying but one shilling and sixpence in the pound, while others pay full four shillings; and that there is not virtue and honesty enough in Parliament to rectify this iniquity? How can we suppose they will be just to us at such a distance, when they are not just to one another? It is not, indeed, as the author says, *very probable*. The *unequal representa-*

tion, too, that prevails in this kingdom, they are so far from having virtue enough to attempt to remedy, that they make use of it as an argument why we should have no representation at all.

"To the equity of this measure [an American representation in Parliament] the Americans themselves, I presume, could have nothing fairly to object."

Provided they had an equitable number of representatives allowed them.

"As to those, indeed, which attend only the choosing a new Parliament, they may, perhaps, by proper means, be considerably lessened, though not wholly removed."

Let the old members continue till superseded by new ones from America.

"But should the king at any time be disposed to dissolve his Parliament, and convene a new one, as hath been often done, only at a few weeks' notice, this, upon the same footing, could not be effected."

By the above it might.

"The method, however, of examining and deciding contested elections, when necessary, must undoubtedly with respect to America be set, in a great measure, upon a different footing from that at present practised in this kingdom."

Let the members be chosen by the American Assemblies, and disputed elections settled there, if any; but there would be none.

"It is not in the least, at this time, probable, that an American representation will ever be convened in England."

I think so too; where neither side approve a match, it is not likely to be made.

"They will be almost wholly excluded the benefit of private acts, by reason of the immoderate expense."

They may make them at home. The expense of private acts in England is shamefully great.

——"The repairing of highways, making rivers navigable, and cutting canals, with a variety of other things of the like kind, wherein recourse must be had to Parliament, and yet the expense be supplied chiefly, if not wholly, by private persons."

All this may be done by their own laws at home.

"This mode of compromise may as well be waived, as it cannot be effected, it is evident, without immense trouble."

Very little.

"And if they should be divided in their sentiments upon it, and uncertain what measures to adopt and follow, it cannot be matter of just wonder and censure."

Then leave it as it is. It was very well, till you attempted alterations and novelties.

"In respect to the article of levying taxes, it should be deemed only a matter of grace, to be resumed at pleasure."

Your humble servant! We thank you for nothing. Keep up your claim, and make the most of it.

"To be placed upon a level with the rest of the subjects of the British crown, is the utmost the colonies can challenge!"

No. They may challenge all that was promised them by charters to encourage them to settle there. They have performed their part of the contract, and therefore have a right to expect a performance of the other part. They have, by the risks and expenses they have incurred, additional merit, and are therefore to be considered as *above the level of other subjects.*

"We cannot otherwise maintain our sovereignty over it, unless our safety were actually at stake and absolutely required it."

I am quite sick of *our sovereignty*. Your safety is only endangered by quarrelling with the colonies; not by leaving them to the free enjoyment of their own liberties.

"They, who first migrated from England to settle in America, well knew, I presume, they were still to continue the subjects of the same government."

They well knew the contrary. They would never have gone, if that had been the case. They fled from your government, which oppressed them. If they carried your government with them, and of course your laws, they had better have stayed and endured the oppression at home, and not have added to it all the hardships of making a new settlement. They carried not your laws; but, had they carried your government and laws, they would now have been subject to spiritual courts, tythes, church acts of parliament, game acts, &c. &c., which they are not, and never were since their being *out of the realm.*

"They knew they were not to be independent."

They were to depend on the king only.

"For no one, I imagine, would doubt, if their charters granted them an inconsistent power, but that they might be justly cancelled; as no government can be supposed to alienate prerogatives necessary to its safe existence."

Every government is supposed to be *compos mentis* when it grants charters, and shall not be allowed to plead insanity. If you break the charters, or violate them, you dissolve all ties between us.

"However, a right of sovereignty in this case

we may undeniably claim and vindicate; though we might safely grant them independency."

You may claim it; but you have not, never had, nor, I trust, ever will have it. You, that is, the people of England, cannot grant the Americans independency of the king. It can never be, but with his consent and *theirs*.

—— "Preserving our sovereignty over them, although at the expense of some portion of their natural prerogatives. They partly consist of our own plantations, and partly of the conquests we have made from a nation in whose hands it would have been dangerous for us to have continued."

Our sovereignty! Our sovereignty for ever. Of *their*, not *our* plantations. The conquests may be yours partly; but they are partly conquests belonging to the colonies, who joined their forces with yours in equal proportion.

"Our very being, therefore, at least as a free people, depends upon our retention of them."

Take care, then, how you use them.

"They are now treated as children. Their complaints are heard, and grievances redressed. But then they would be treated rather as slaves, having the swords of their masters perpetually held at their throats, if they should presume to offer half the indignities to the officers of the French crown, which they have often with impunity done to those of the British."

The direct contrary is true; they are not redressed; they are refused to be heard. Fresh oppressions and insults are continually added. English swords are now held at our throats. Every step is taking to convince us, that there is no difference in government.

"Nay, they have Assemblies of their own to redress their grievances."

It is well they have.

"And if that should be done, what marks of sovereignty will they allow *us* to enjoy? What sort of claim will they indulge us with? Only, I suppose, a mere titular one. And if so, would they then expect, that we should still protect them with our forces by sea and land? Or will they themselves maintain an army and navy sufficient for that purpose? This they certainly at present are not able to do, if they were not sheltered by the wings of Great Britain."

What would you have? Would you, the people of England, be subjects and kings at the same time? Don't be under any apprehensions for them. They will find allies and friends somewhere; and it will be worth no one's while to make them enemies, or to attack so poor a people, so numerous, and so well armed.

"Nor is there any reason to apprehend, that they should be at all formidable to England; as the number [of American representatives in Parliament] might be properly limited, as those of Scotland were at the union."

A proper limitation can only be this, that they shall from time to time have such a number of additional members, as are proportioned to their increasing share of the taxes and numbers of people.

"An exact estimate can scarcely be made of what expense their protection stands in to Great Britain."

The protection is mutual. They are always in time of war at as much expense as would be necessary to protect themselves; first, by the troops and armed ships they raise and equip; secondly, by the higher price they pay for all commodities, when drawn into war by English European quarrels; thirdly, by obstructions to the vent of their produce by general embargo.

"They are justly chargeable with a certain portion of the civil list; for this most indubitably constitutes a part of government. How this article at present is managed in England, is not now my business to inquire."

I will tell you how it is managed. The colonies maintain their governors, who are the king's representatives; and the king receives a quitrent from the lands in most of the colonies.

"In many parts they are little, perhaps, or nothing at all inferior in respect of their conveniences to the mother country."

As these differences cannot be known in Parliament here, how can you proportion and vary your taxes of America so as to make them equal and fair? It would be undertaking what you are not qualified for, as well as doing what you have no right to do.

"Yet it must be granted, that they know best the state of their own funds, and what taxes they can afford to pay."

And yet you would be meddling.

"It is very certain, that England is entitled to a great deal of gratitude from her colonies."

The English are eternally harping on this string, the great obligation the colonies are under for protection from the French. I have shown, already, that the defence was mutual. Every man in England, and every man's estate, have been defended from the French; but is it sense to tell any particular man, "The nation has incurred a debt of one hundred and forty-eight millions to protect you and your estate; and therefore you owe a great deal of gratitude to the nation?" He will say, and justly, "I paid my proportion, and I am under no obligation." The colonies, as I have shown in preceding notes, have always paid more in various ways, and besides extending your trade

sometimes (from which you exclude the colonies), and for whims about the balance of power, and for the sake of continental connexions in which they were separately unconcerned. On the other hand, they have, from their first settlement, had wars in America, in which they never engaged you. The French have never been their enemies, but on your account.

"That the late war was chiefly kindled and carried on, on your account, can scarcely be denied."

It is denied.

——"By the steps they seem to take to shake off our sovereignty."

Our sovereignty again! This writer, like the Genoese queens of Corsica, deems himself a sprig of royalty!

"For as soon as they are no longer dependent upon England, they may be assured they will immediately become dependent upon France."

We are assured of the contrary. Weak states, that are poor, are as safe as great ones that are rich. They are not objects of envy. The trade, that may be carried on with them, makes them objects of friendship. The smallest states may have great allies; and the mutual jealousies of great nations contribute to their security.

——"And whatever reasons there might exist to dispose them in our favour in preference to the French; yet, how far these would operate, no one can pretend to say."

Then be careful not to use them ill. It is a better reason for using them kindly. That alone can retain their friendship. Your sovereignty will be of no use if the people hate you. Keeping them in obedience will cost you more than your profits from them amount to.

"It is not, indeed, for their jealousy of their rights and liberties, but for their riotous and seditious manner of asserting them."

Do you Englishmen then pretend to censure the colonies for riots? Look at home! I have seen, within a year, riots in the country about corn; riots about elections; riots about work-houses; riots of colliers; riots of weavers; riots of coal-heavers; riots of sawyers; riots of sailors; riots of Wilkesites; riots of government chairmen; riots of smugglers, in which custom-house officers and excisemen have been murdered, the king's armed vessels and troops fired at, &c. In America, if one mob rises, and breaks a few windows, or tars and feathers a single rascally informer, it is called *rebellion*; troops and fleets must be sent, and military execution talked of, as the decentest thing in the world. Here, indeed, one would think riots part of the mode of government.

"And if she had not thought proper to cen almost all her care, as she has done, upon m ing the late peace, in procuring them a safe tablishment, and to sacrifice to it, in a mann every other object, she might, at least, exp from them a more decent and dutiful demea our."

In the last war America kept up twent five thousand men at her own cost for fi years, and spent many millions. Her troo were in all battles, all service. Thousan of her youth fell a sacrifice. The crow gained an immense extent of territory, a a great number of new subjects. Brita gained a new market for her manufacture and recovered and secured the old one amo the Indians, which the French had inte rupted and annihilated. But what did t Americans gain, except that *safe establis ment*, which they are now so taunted with Lands were divided among none of then The very fishery, which they fought to o tain, they are now restrained in. The plu der of the Havana was not for them. A this very *safe establishment* they might well have had by treaty with the Frenc their neighbours, who would probably ha been easily made and continued their friend if it had not been for their connexion wi Britain.

"And it seldom happens, that any one fa the better for his insolence."

Then don't be insolent with your powe

"For should matters on all sides, as I ho they never will, be carried to extremities, I ca not take upon me to say but England may y produce both a Ministry and Parliament, th would rather share them once more with t French, than totally relinquish her present pr tensions."

We have been often threatened with th wise measure of returning Canada to Franc Do it when you please. Had the Frenc power, which you were five years subduin with twenty-five thousand regulars, an twenty-five thousand of us to help yo continued at our backs ready to support an assist us, whenever we might think prop to resist your oppressions, you would neve have thought of a Stamp Act for us; yo would not have dared to use us as you hav done. If it be so politic a measure to hav enemies at hand (as the notion is) to kee *your subjects* in obedience, then give part o Ireland to the French to plant. Plant an ther French colony in the Highlands, to kee rebellious Scotland in order. Plant anothe on Tower Hill, to restrain your own mob There never was a notion more ridiculous Don't you see the advantage you may nav if you preserve our connexion? The fift thousand men and the fleet employed i America, during the last war are now s

much strength at liberty to be employed elsewhere.

"The legislative power of every kingdom or empire should centre in one supreme assembly."

Distinguish here what may be *convenient* from what is *fact*. Before the union it was thought *convenient*, and long wished for, that the two kingdoms should join in one parliament. But, till that union was formed, the fact was that their parliaments were distinct, and the British Parliament would not make laws for Scotland. The same fact now subsists in America. The parliaments and states are distinct; but the British Parliament has taken advantage of our minority, and usurped powers not belonging to it.

"It would be amiss, perhaps, to ask them what bounds they would be content to fix to their claims and demands upon us, as hitherto they seem to be at a loss where to stop."

They only desire, that you would leave them where you found them; repeal all your taxing laws, and return to requisitions where you would have aids from them.

"I must freely own, that whatever opinion I may have of their right, I certainly have not quite as favourable one of their conduct, which often is neither consistent nor prudent."

They think the same of yours.

"If they are really willing we should exercise any acts of sovereignty among them at all, the imposition they have so riotously resisted might not improperly, perhaps, have been allowed better quarter."

Leave the king, who alone is the sovereign, to exercise his acts of sovereignty in appointing their governors, and in approving or disapproving their laws. But do you leave it to their choice to trade elsewhere for commodities; to go to another shop? No! you say they shall buy of you, or nobody.

"Nor should mere custom, nor any charter or law in being, be allowed any great weight in the decision of this point."

The charters are sacred. Violate them, and then the present bond of union (the kingly power over us) will be broken.

"The Americans may insist upon the same rights, privileges, and exemptions, as are allowed the Irish, because of the similarity, if not identity, of their connexions with us."

Surely the Americans deserve a little more. They never put you to the trouble and expense of conquering them, as Ireland has done three times over. They never were in rebellion.—I speak now of the native Irish. The English families settled there lost no rights by their merit in conquering that country.

"But if any distinction were to be made, most certainly, of the two nations, the Americans are least entitled to any lenity on that score."

I wonder much at this "*most certainly*."

"The terms she may not think safe and proper to grant the Irish, she may judge full as dangerous and imprudent to grant the Americans."

It is very imprudent to deprive America of any of her privileges. If her commerce and friendship are of any importance to you, they are to be had on no other terms, than leaving her in the full enjoyment of her rights.

"Long before we could send among them any considerable number of forces, they might do a great deal of mischief, if not actually overturn all order and government."

They will take care to preserve order and government for their own sakes.

"Several other reasons might be offered, why the same measures, in regard to both nations, might not be altogether alike convenient and advisable."

Where you cannot so conveniently use force, there you should endeavour to secure affection.

OBSERVATIONS

ON

PASSAGES IN A PAMPHLET

ENTITLED

"THE TRUE CONSTITUTIONAL MEANS FOR PUTTING AN END TO THE DISPUTES BETWEEN GREAT BRITAIN AND THE AMERICAN COLONIES.—LONDON, 1769."

"EVERY British subject must acknowledge, that the directive influence of the British state remains with the British legislature, who are the only proper judges of what concerns the general welfare of the whole empire."

The British state is only the island of Great Britain; the British legislature are undoubtedly the only proper judges of what concerns the welfare of that state; but the Irish legislature are the proper judges of what concerns the Irish state, and the American legislatures of what concerns the American states respectively. By "the whole empire" does this writer mean all the king's dominions? If so, the British Parliaments should also govern the isles of Jersey and Guernsey, and Hanover; but this is not so.

"But the land tax, which I have proposed, is in its very nature unoppressive, and is equally well suited to the poorest as to the richest province of the British empire."

This writer seems ignorant, that every colony has its own civil and military establishment to provide for; new roads and bridges to make; churches and all public edifices to erect; and would he separately tax them, moreover, with a tax on lands equal to what is paid in Britain?

"The colonists must possess a luxuriant abundance to be able to double their inhabitants in so short a space."

How does this appear? Is not a mere competence sufficient for this purpose? If America will consent to pay thus its proportion of British taxes, will Britain pay out of the whole all the American taxes? Or is America to pay both?

"The produce of the planters purchases for them what others buy with gold and silver; but even several of the colonists of the rank of good livers have often been seen to pay the price of a negro with gold. As instances of Virginian luxury, I have been assured, that there are few families there without some plate; and that at some entertainments the attendants have appeared almost as numerous as the guests."

Was not the gold first purchased by the produce of his land, obtained by hard labour? Does gold drop from the clouds in Virginia into the laps of the indolent? Their very purchasing plate and other superfluities from England is one means of disabling them from paying taxes to England. Would you have it both in meal and malt? It has been a great folly in the Americans to entertain English gentlemen with a splendid hospitality ill suited to their circumstances; by which they excited no other grateful sentiments in their guests, than that of a desire to tax the landlord.

"It cannot be deemed exorbitant considering their traffic with the French sugar-islands, as well as with our own; and this will make the whole of their importations four millions per annum."

This is arguing the riches of a people from their extravagance; the very thing that keeps them poor.

"The inhabitants of Great Britain pay above thirteen millions sterling every year, including turnpikes and the poor's rates, two articles which the colonies are exempt from."

A turnpike tax is no burthen, as the turnpike gives more benefit than it takes. And ought the rich in Britain, who have made such numbers of poor by engrossing all the small divisions of land, and who keep the labourers and working people poor by limiting their wages,—ought those gentry to complain of the burden of maintaining the poor that have worked for them at unreasonably low rates all their lives? As well might the planter complain of his being obliged to maintain his poor negroes, when they grow old, are sick, or lame, and unable to provide for themselves.

"For though all pay by the same law, yet none can be required to pay beyond his ability;

and the fund from whence the tax is raised, is, in the colonies that are least inhabited, just as able to bear the burden imposed, as in the most populous country of Great Britain."

The colonies are almost always considered by these ignorant, flimsy writers, as unwilling to contribute to the general exigencies of the state; which is not true. They are always willing, but will have the granting of their own money themselves;—in which they are right for various reasons.

"They would be content to take land from us gratuitously."

What land have they ever taken from you? The lands did not belong to the crown, but to the Indians, of whom the colonists either purchased them at their own expense, or conquered them without assistance from Britain. The engagement to settle the American lands, and the expense of settlement, are more than equivalent for what was of no value to Britain without a first settlement.

"The rental of the lands in Great Britain and Ireland amounts to about twenty-two millions; but the rental of the same extent of lands in America is not probably one million sterling."

What signifies extent of unsettled lands, that produce nothing?

"I beg to know if the returns of any traffic on earth ever produced so many per cent. as the returns of agriculture in a fertile soil and favourable climate."

How little this politician knows of agriculture! Is there any county where ten bushels of grain are generally got in for one sown? And are all the charges and advances for labour to be nothing? No farmer of America in fact makes five per cent. of his money. His profit is only being paid for his own labour, and that of his children. The opulence of one English or Dutch merchant would make the opulence of a hundred American farmers.

"It may, I think, be safely concluded, that the riches of the colonists would not increase so fast, were the inhabitants to leave off enlarging their settlements and plantations, and run eagerly upon manufactures."

There is no necessity of leaving their plantations; they can manufacture in their families at spare times. Depend upon it, the Americans are not so impolitic as to neglect settlements for unprofitable manufactures; but some manufactures may be more advantageous to some persons than the cultivation of land, and these will prosecute such manufactures notwithstanding your oratory.

THE END.

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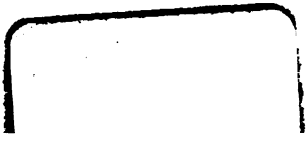
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